

amiga

user
INTERNATIONAL

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NOVEMBER 1993

INSIDE

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- Macro 68
- ProControl
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Another bumper AUI Superdisk! - November 1993

MagicMenu -
Transforms your
workbench



RDS - Random Dot
Stereograms, genuine 3D
before your very eyes!

CacheClock - A combined clock and disk
cache

RecPlay - Record and playback your mouse
movements

AssignPrefs - Edit all your system assigns

Xatoms - A complete game weirdly mixing
chemistry, logic and tactics. Terrific fun!

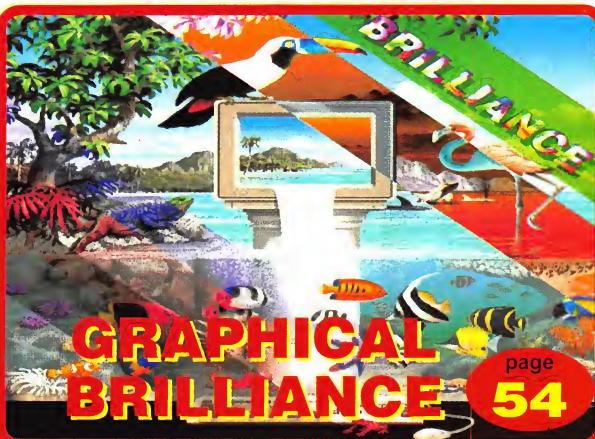
Plus Lex, Module player, lastboot and more.
Check cover disk pages for compatibility

1MB RAM REQUIRED.

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superdisk

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**NO TRICKS
JUST TREATS.**



FRUIT OF THE EARTH • FRUIT OF THE EARTH • FRUIT OF THE EARTH

RAINBOW ??



TyPaint
**THE Paint
Program**



RAINBOW PICCOLO
Low cost 24 bit



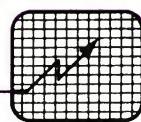
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amiga

U S E R
INTERNATIONAL

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...And What They Used

Commodore's Amiga A3000, A2000, A500, Citizen's Swift 240C, Canon's BH-20 Bubblejet, Consultron's CrossDOS, Electronic Art's Deluxe Paint IV, GVP's A530 Turbo, Toshiba's IDE drive, Supra's V32 Fax Modem, Datei's Action Replay MKIII, ASDG's Art Department Professional, Epson's GT-6500 colour flatbed scanner, Readysoft's AMAX, OpaTech's Opalvision, Innovatronic's Directory Opus, JCL's ColourPic Plus and Cabaret, John Veldhuis' VirusChecker, JVC's HR-D980 Video Recorder, Micro-System's Scribble, 32bit RAM from First Choice Computers, Discovery Software's Grabbit.

AUI

Amiga User International was first published in 1986. No other Amiga magazine had, at that time, been published in Europe. It has now come under new ownership and intends to continue as the best all round guide to the UK and International Amiga scene.

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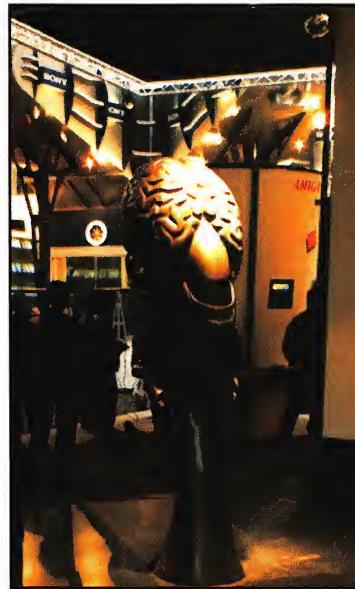
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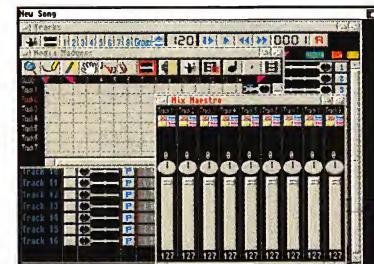
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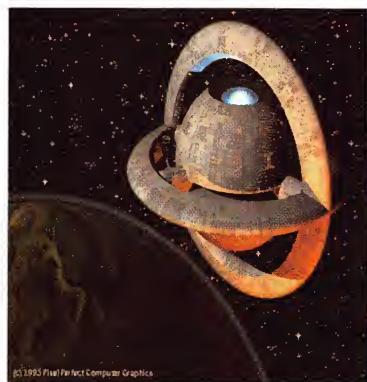
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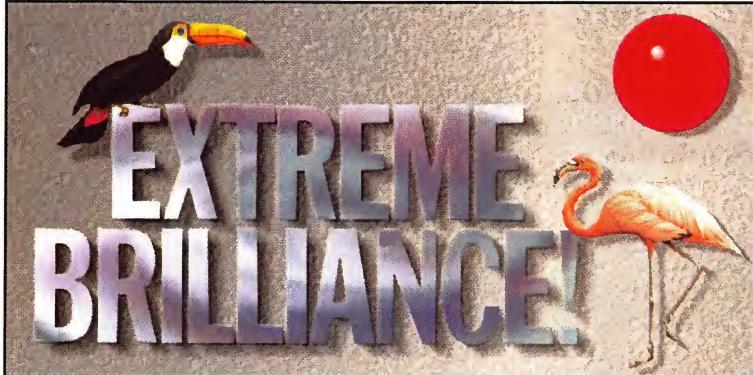
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Why run around trying to find a newsagent that hasn't sold out of *AUI* when you can ensure a copy by subscribing?

The Amiga Dimension

Hands up anyone who knows what Cairo is. No, not where, but WHAT. And connected with computing. Not unrelated to the answer is a letter in Write to Reply this month commenting - complaining - about a remark by Barry McCarthy on the need for a uniform Workbench interface for all Amiga programs. The reader pointed out that way danger lies. If you create foolproof systems only fools may use them.

Right the reader may be, but he is struggling against the tide of technological history. Systems get easier so that more people who aren't experts can use them. As an example of this, four of the world's leading computing companies, Intel, Microsoft, Compaq and VLSI have just announced they are developing a handheld "mobile companion" based on open software and chipsets which they say "will become the industry standard for mobile devices." By which they mean computers.

At the Live '93 Consumer Electronics Show, reported on in this issue, perhaps the most exciting exhibits were all mobile. Computers, cameras, CD players, telephones... Ever smaller and easier to use and carry. Apple's Newton, a palm-sized computer masquerading as a message pad with pen input, drew probably the largest crowds of any single item there. There was a mobile phone no bigger than a couple of fingers that even I, who regards the telephone as the most intrusive instrument, would have liked to have in my pocket. What these and other mobile technology have in common is, partly because of the restrictions of their size and lack of techno-expertise of their users, the need to be simple to use.

Which computers are not. A friend whose computing experience was almost exclusively confined to using an Amiga at home has at work been given a terminal linked to a mainframe. "I don't like it," she complained. "It doesn't even have a mouse!" I smugly pointed out that the user-friendly technology which she had taken for granted on her Amiga was really pretty advanced stuff.

When I was asked recently for help by a techno-novice colleague on a PC spreadsheet with which I was unfamiliar, I feared I was going to stumble around like, as someone recently put it about unfamiliar software, "a stone age man trying to re-invent fire." It was with relief I managed to hit the right icons the first time but left quickly before I was taken to be - and then discovered not to be - a PC expert. Operating systems, interfaces, programs, all bewilderingly and unnecessarily different.

And what, in the classic phrase, I hear you cry, has this to do with the capital city of Egypt? Well, nothing. I did say WHAT not where. Cairo is another step in Bill Gates' Microsoft's attempt to dominate the computer world. It is software that is being developed to be used across all systems. On mainframes, minis, PCs, Apples, Amigas... Anything that is commercially and technically worthwhile. "Real system transparency...seamless operability", they call it. The answer to Barry McCarthy's prayer. Making all systems usable by everyone.

If such a development happens - and it's still a big "if" - my guess is that above all, to be successful, it must work on all these ever tinier mobile devices that are going to fill our pockets. And, just as clocks that once only topped steeples or stood Grandfather-style became mobile as wrist watches, the technology won't only become cheap but also very easy to use and so accessible to all of us fools everywhere. Now that's what I call progress.

Antony Jacobson
Managing Editor

aui SuperDisk

For those of you unfamiliar with Lha, don't panic! We've used 'installer' (Commodore's own licenseware utility) which makes the dearchiving procedure about as easy as it could possibly be.

Installer offers a standard method of installing any program onto the hard, floppy or RAM drive. Install, for our purposes, can be read as dearchive, so the programs can be dearchived to your chosen destination very easily.

the procedure

First, boot up your machine with Workbench or the SuperDisk. Double click on the SuperDisk icon and wait for the installer program to load.

Unless you really want a log of every action that is performed by the program, simply click on 'proceed' to get underway. As the message says, you are about to start the dearchiving procedure, so click on 'proceed' again to get underway for real!

Now select hard or floppy drive as your destination device and click on 'proceed'. Note, if you want to dearchive to the RAM disk click on proceed anyway, since the RAM disk can be selected later in the procedure (and is in fact the default directory).

There is a scrollable list of the archived programs on the

This month's SuperDisk is packed with the latest and best programs around. As well as being 100% full, we've also used Lha to archive everything, enabling us to cram

1.5megs onto a single disk!

Patrick Howlett explains... .

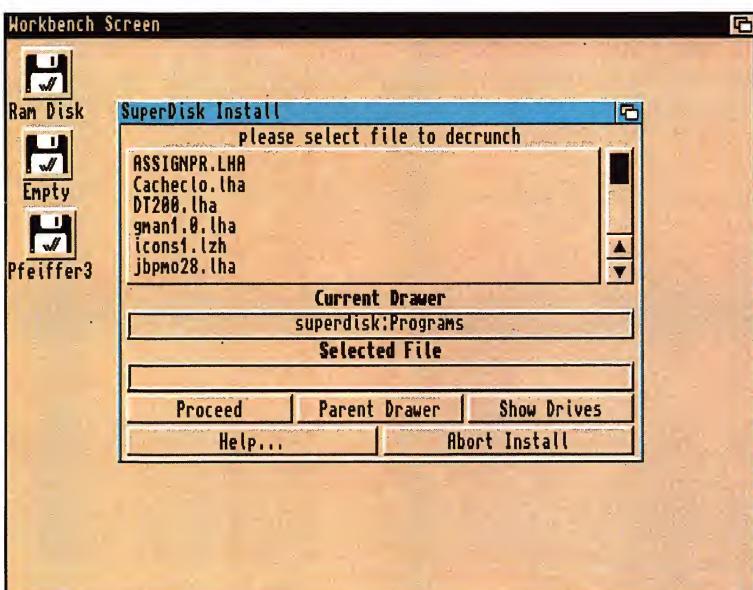
SuperDisk, use the up/down arrows or scroll bar to scroll the list. Click on the file that you wish to dearchive and click on 'proceed'. The install program will now ask you to which the file should be dearchived, the default is RAM, but use the 'show drives' and/or 'make new drawer' options to select an alternative location if required.

Click on proceed and installer will show you the exact command that it is about to execute, if it all looks good (if you're interested that is), click on proceed.

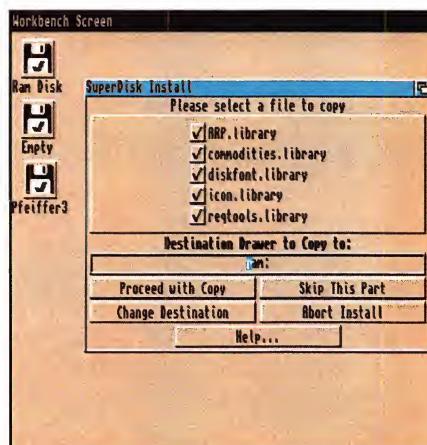
The floppy will now whirr into life as the file is dearchived, when it's finished, you have the option to continue dearchiving (by going

through the selection process again) or finishing the dearchive procedure. If you choose the latter, the final task is to decide whether or not to install any libraries. If you select 'Yes', the installer will show a list of all the library files available on the SuperDisk. Click on a particular library to remove its tick thus indicating that the library file will not be copied. Select a destination for the libraries (probably your Workbench Libs: directory) and click on proceed, the libraries will now be copied.

At this stage the dearchived program(s) will be in the selected destination. Once you have accustomed yourself to the above procedure, you will find that it is very easy to dearchive any of the files on the disk. We are using



The installer utility is almost idiot proof.



The installer will also copy libraries to any destination.

Installer for the first time this month, so if you like it or loathe it, drop us a line.

libraries

This particular aspect of the Amiga's OS can be a little confusing especially for beginners. All programs interact with the OS and most need information and special routines which are not part of the ROM kernel. These routines are contained in files called libraries which are loaded into RAM at runtime for use by the program. So if a required library is missing or not found then the program will fail to run.

We generally provide the libraries that are required by the programs on the SuperDisk, and these can be copied to the libs: directory of your Workbench disk (or other bootable disk).

Remember that the computer will always look for the libs directory on the disk that you booted up with, therefore if there is a problem with a program needing a library ensure that the library is present in the directory.

Finally, Workbench 3 has a number of new libraries which can't be used with Workbench 1.3, so don't try using them with the old OS. If in doubt, read the program documentation, since programmers usually put this information into their readme files.

disk 28

archives

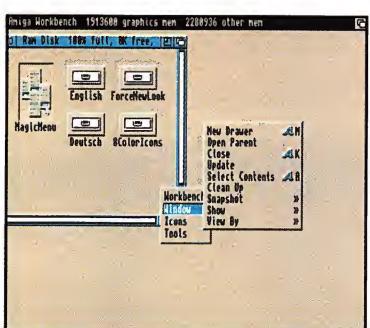
All the programs on this month's disk use the original archive name and due to the different conventions, the names can seem a little obscure. Here is an at a glance list of all the archives on the disk.

ASSIGNPR.LHA -	AssignPrefs
Cacheclo.lha -	CacheClock
DT200.lha -	DosTrace
gman1.0.lha -	Garbage Manager
icons1.lzh -	Workbench icons
jbpromo28.lha -	Mouse Odometer
lastboot.lha -	Lastboot
lex.lha -	Lex
MMENU127.LHA -	MagicMenu
Modplayer.lha -	Module Player
RDS11.lha -	Random Dot Stereograms
RECPLAY.LHA -	RecPlay
stick102.lha -	Stick It!
VC630.LHA -	VirusChecker V6.30
Xatoms.lha -	Exploding atoms

the programs

There are 15 (count them!) archives on the disk this month. In no particular order, here is a brief description of each:

magicmenu



With MagicMenu you can access menu items from anywhere on the Workbench screen.

This is Workbench 2 or 3 only and aims to provide some of the features that the programmer felt were still missing from the newer versions of Workbench. In particular, the menu operation has remained exactly the same since the early days of the Amiga.

Simply run the program 'MagicMenu' and select your

options from the startup screen. As well as new look menus there is a handy facility which allows you to select a menu item from anywhere on the screen, as shown on the screenshot. There's a lot more to it than that, but read the ample documentation with the program to fully understand this powerful utility.

cacheclock

This is a small utility which does two things. It puts a small bar on Workbench which displays the time and free memory, and it also provides a disk cache which speeds up floppy and hard drive operations.

assignprefs

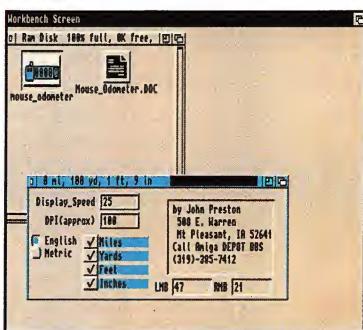
If you use a lot of applications then you will no doubt be aware of all the different assigns that are needed to show where your programs and files are kept. Assignprefs provides a Workbench interface which allows for easy editing and maintaining of your system assigns.

garbage manager

This is another small utility which

simply searches a hard disk for multiple copies of files. It has several options for use and might be useful to anybody with hundreds of files on their drive.

mouse odometer



Now you know when to give your mouse that 10,000 mile service!

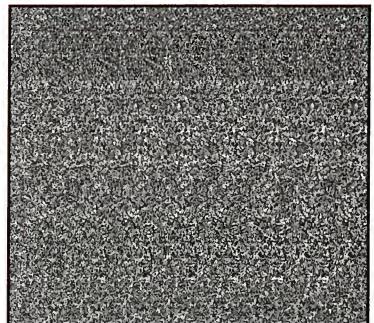
Another incredibly useful utility which is in constant use here at **AUI**. What does it do? Well, it measures how far your mouse travels for a start. It also has a mouse speed indicator and in the expanded window shows the total number of left and right mouse button clicks! All the data is recorded in a file on disk, so you can monitor your work rate (?) over a long period of time.

dostrace

This program is Workbench 2 or higher and is similar to SnoopDos. It reports on all the activities performed by AmigaOS and can be used in a variety of ways. This is very useful for determining what libraries and devices are used by a particular program.

rds

Random dot stereograms use a little known principle to generate a true 3D image from a 2D picture made up of random dots. There isn't the space to go into detail here so read the documentation to find out more about the principle as well as the program. What the program does though is take any IFF picture



There really is a true 3D picture here, honest!

and transform it into a random dot stereogram, which can then be viewed on screen or printed out. It takes a little while to train your eyes to see these 3D pictures but the results are very interesting. Be patient and try out the example printed here! Note, at the last minute we spotted a little problem with this program. The icon which was added makes the program fail, so use the CLI to CD to the correct directory and then DELETE RDS.info from your disk. Run the program from the Cli by typing RDS <filename>.

lex

Lex performs readability tests on any ascii documents using 3 methods of analysis. This won't help you to write any better but it can be interesting to compare the results that different documents produce.

lastboot

Place this little program in your startup sequence and every time the machine boots up it reports the time and date of the last boot up. Many computers do this, and now your Amiga can! It does require that you have a clock fitted though.

stick it

Here's a neat program that gives you Post It notes for your Amiga! Simply type your message into the requestor and a small window is

attached to the Workbench screen containing the message. The notes are saved to disk so if the program is started at boot up then they will automatically appear. There are a few other nice touches to this program too.

recplay

This utility is almost as useful as the Mouse Odometer. Recplay will record and playback the exact movements of the mouse. Both speed and direction are recorded using two files, one to record movement and one to play it back. It really does work well, give it a try!

mod player



Sounds abound all around with this smashing HiFi!

done in hires interlace so you have to put up with some flickering, but it looks brilliant and again has all the features of a real hifi. It also supports just about every module format and there is a small module with this program so that you can try it out straight away. The instructions are a little sparse (to say the least!) so trial and error is the way

If you thought that STP was a good looking module player then have a look at this one. It's

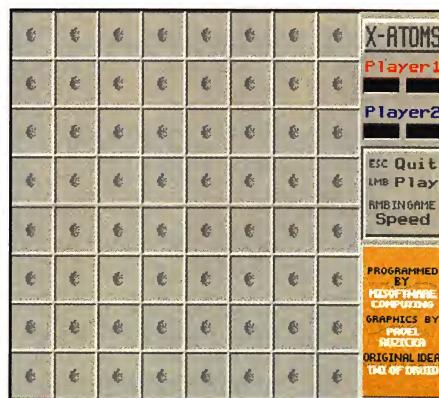
done in hires interlace so you have to put up with some flickering, but it looks brilliant and again has all the features of a real hifi. It also supports just about every module format and there is a small module with this program so that you can try it out straight away. The instructions are a little sparse (to say the least!) so trial and error is the way

read the instructions!

If you get stuck with a program then you will probably find the answer somewhere in the documentation. Therefore it's best to read the documents on disk that usually accompany each program.

If for some reason you can't access the program documentation then either the default tool is not set to 'more' or there isn't any. To set the default tool to 'more' use the Workbench 'info' or 'information' option selected from the 'icon' pulldown menu.

Always check that the program you are trying to run is compatible with your machine. Also remember that if the program requires any libraries then you



A PhD in nuclear physics isn't going to help you in this game!

to go. Just click on a few knobs to work it all out. Eventually you might find the remote control (yes, really!!).

xatoms

Xatoms is a two player game based on exploding atoms. You first take turns to fill the screen with atoms and then start to add extra electrons. Add too many and bang! A Nuclear explosion radically alters the position. Full instructions on the rules and gameplay are in the readme file.

To round off this month's disk we have as usual, the latest version of the best virus checker around. John Veldthuis' VirusChecker is now at version 6.30 and has been updated to detect the very latest virus on the Amiga scene.

There is also a small archive containing many different and unusual icons which can be used to add that finishing touch to your Workbench programs. a

shareware

Just a brief reminder that some of the programs on our Coverdisk are Shareware. This means that you can try them out, but if you regularly use them you should send a registration fee to the author. Registration fees are between £5 and £20 and sometimes the author will send you the latest version in return. You can send an International Money Order, or preferably a cheque but many authors don't accept cheques if they are outside the UK. If you want to risk sending cash in a registered post, it's up to you. We wouldn't advise it but it's your money...

Faulty Disk?

In the event that your **aui** coverdisk fails to load (because of a read/write error etc), please return it to the following address for a free replacement. Allow 28 days for delivery.

aui Faulty Disks, 138 Lambeth Walk, London, SE11 6EW

Don't forget to include your name and full postal address in BLOCK capitals. Collector's tokens from the back of cereal packets are not required, thank you.

Reader's Contributions

We are always looking for new and original programs to put on our coverdisk. If you would like to see your name and program feature in **aui** then please contact **aui** at the address given in the front of the magazine. Alternatively, give us a call if you think we would be interested in your program (071 487 4284 ext 2186). The shorter the better, under 100k including any libraries - unless it's brilliant! Compiled AMOS programs are welcomed.

COMPATIBILITY

MagicMenu, DosTrace and Stick It are the only programs that will not work with Workbench 1.3 on this month's SuperDisk. All the others have been fully tested on Workbench 1.3, 2 and 3. As mentioned in the previous pages, many programs are dependant on various libraries so if a program you are trying to run is not working, first check that it is compatible with your version of Workbench and then check that all the required libraries are present in the libs directory of your boot disk.

Burning Chrome BBS

Thanks to Simon Gardner who helped us to obtain some of this month's programs. If you have a modem you can contact Simon's BBS on 0428 727060 (19.2K HST DS+ V32bis). This is not a voice number so you can't make funny noises down the phone! This is a modem only number!

NO DISK?

Yes, consult your newsagent! But we've had so many complaints about readers not getting disks that we're trying out a new idea. We can't be responsible for what happens at the end of a long chain of different organisations who handle the magazine when it leaves us, especially outside of this country. We know that someone appears to be taking disks off copies of the magazine in some countries but we don't know whether they are being stolen or taken off as a protection against a large sales tax having to be paid.

So what we propose is this: if you live in the U.K. you will have to consult your newsagent and get him/her to contact the wholesaler etc in the usual way. However, if you are outside the U.K. we want to help you get the advantages of the Superdisk so if you send us £1 in sterling (International Money Order etc) to cover postage etc and we will send you the month's Superdisk. Okay?

AMIGA

Order Line:

(+44) 0753 554338 MAIL ORDER**MICROBOTICS**

M1230XA 40/4	40MHz 68030, 0MB RAM	£299.99
M1230XA 40/4	40MHz 68030, 4MB RAM	£399.99
M1230XA 50/5	50MHz 68030, 0MB RAM	£399.99
M1230XA 50/4	50MHz 68030, 4MB RAM	£499.99

Microbotics were the first company to bring out their RAM expansion for the A1200, and now it's even better, with realtime clock and a choice of maths co-processor.

MBX1200z 14MHz 68881, 1MB RAM	£139.99
MBX1200z 14MHz 68881, 4MB RAM	£279.99
MBX1200z 14MHz 68881, 8MB RAM	£379.99
MBX1200z 25MHz 68882, 1MB RAM	£199.99
MBX1200z 25MHz 68882, 4MB RAM	£339.99
MBX1200z 33MHz 68882, 8MB RAM	£449.99

FUJITSU

Fujitsu are well-known for their quiet, fast and robust range of wider-than-normal dot-matrix printers. Both printers come with Amiga drivers, printer cable, Personal Write and Personal Fonts Maker.

Fujitsu DL1150 24-pin A4/A3 colour printer	£269.95
Fujitsu DL1200 24-pin A3/A2 colour printer	£259.95

Also available, Fujitsu's bubblejet printers:
Fujitsu Breeze 100

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**IVS**

The Trumpcard 500AT (pictured) has room for up to 8MB RAM and an IDE hard drive. The lowest cost combination.



Trumpcard500AT 80MB HD 0MB RAM	£249.99
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Vector 25MHz 68030, 68882, with 0MB RAM	£399.99
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HOW TO ORDER

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Items that are heavy and/or fragile will only be sent by next-day courier delivery, please add £5.50 for deliveries in the mainland UK and check

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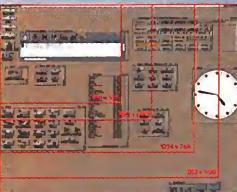
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Prime Image	£POA

Bi-directional standards converter board for any Amiga 2000, 3000, 4000 or PC. PAL to NTSC, PAL to SECAM or any other combination

PICASSO

Picasso is a graphics acceleration card for the A2000, A3000 and A4000. It gives you resolutions of up to 1280 x 1024 in 256 colours and can be used by programs such as Personal Paint, AD-Pro, Pagestream, XCAD-3000, Wordworth and many others! Easy-to-fit and requiring only one monitor Picasso is the solution to your high resolution needs. If you've ever looked enviously at a friend's PC running Windows in 800 x 600, go one better and run your programs at 1280 x 1024!



Picasso II 1MB with Personal Paint Lite **£284.99**
Picasso II 2MB with Personal Paint Lite **£329.99**

IDEK

Amiga World, as it states, called the MF-5017 (pictured) "...the finest monitor I have ever seen..." and it has to be seen to be believed. The 5017 will display all Amiga screenmodes, whilst the 8217 and 8421 only work from 30kHz upwards, ideal if you have an A3000 or a machine with a Picasso board...



All these monitors have a two-year back to base warranty and are beautifully designed.

IDEK MF-5017 **£849.99**

17" colour monitor, 15.5-40kHz, .31 dot pitch, resolutions up to 1024 x 768

IDEK MF-8217 **£799.99**

17" colour monitor, 30-65kHz, .28 dot pitch, MPR-II, resolutions up to 1280 x 1024, micro-controlled

IDEK MF-8421 **£1759.99**

21" colour monitor, 24.8-85kHz, .26 dot pitch, MPR-II, resolutions up to 1600x1200, micro-controlled, auto power-off, auto contrast, auto size

SOFTWARE BARGAINS

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Sculpt Animate 4D	£59.99
ShowMaker	£59.99
Spectracolor	£19.99
Understanding Imagine Book & Disk	£29.99



This is only a small sample of what we carry. Call us for items you don't see on the page!

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newsfi

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Amiga Movie Award
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Brother's Double
Media Point
DRAMs Price Explosion

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New HD Standard
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Lock Up Your Computers
Embedded Controller
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Sunlight Touch Screen

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Brighter Star
Autotime's Laser Buddy
21st Century Hewson
Intense Hackers

*Edited and compiled
by Anthony Mael and
Martin Witton*



Use an Amiga and win an Oscar next, Ben?

MOVIE AWARD

For the first time in the 60 year history of the IAC, a movie made entirely on the Amiga has received a major award in the prestigious IAC International Film & Video Festival. (Well, of course, the Amiga hasn't been around the full 60 years anyway.) Ben Northover produced his movie "Zizzy, the Balls and the Butterflies" at home using an A500 and recorded the movie on videotape.

Ben received a £600.00 JVC video camera and the IAC Junior Challenge Shield for the best movie produced by a person under 17 years old.

If you qualify and have made a film - on the Amiga or not - the closing date for the 1994 competition is 31st Jan 1994.

Contact: IAC, 4, Tresco Ave, Stretford Manchester M32 8PE. Tel: 061 864 4603.

WHEW! WHAT A F

A
L
L

OKI Systems have announced that the price of the 8ppm laser printer product range is being reduced. The substantial reduction for the OL810 and the OL830 is from £1499 to £999 while the OL850 is £1499 from £1899.

OKI say they have recently introduced new features for the OL810 which include auto interface switching, faster printing, automatic page eject and a software programmable front panel. And they've cut the prices too...

Now prices are cut all the time but a fall of around 30% is really something. How can a company afford it? I hear you cry. (Do I?) Well, a possible explanation is that

after the initial high price of a product that is required to recover the research and development costs has been held for a time and the investment paid off, then a price fall is natural.

Another, more cynical view might be that companies make exorbitant profits when they can get away with it and when the competition starts to catch up and the consumer catch on, down come the prices. 10%, 20%, 30% and even more.

Of course, we are sure it must be the first explanation that applies to OKI...

Contact: OKI, 550 Dundee Road, Slough Trading Estate, Slough, Berks. SL1 4LE. Tel: 0753 819819.

SENSIBLE ENGLISH

If you, like most of us, find annoying the use of jargon, bad grammar and just plain ignorance in computing (and especially computing magazines!) "Making Sense of English in Computers" by Geoff Wilkins may be just the thing for you. It has been written, the publishers told *AUI*, as an easily accessible A-Z guide book to the language of computers.

It lists and explains terms from all areas of computing including programming, electronics, games and artificial intelligence. Priced £5.99 (paperback).

Contact: Chambers Harrap Publishers Ltd., 43-45 Annandale Street, Edinburgh EH7 4AZ. Tel: 031 557 4751.

1e

WHAT YOU SEE IS WHAT YOU...

LABEL

Seikosha's Smart Label Printer Pro is neat little palm sized device measuring 100 x 200 x 150mm and weighing in at just 450g. The advanced thermal engine provides, Seikosha told *AUI*, laser quality printing at 260dpi and features thermal edge enhancement for clear characters and graphics. The quick printing (6 secs per label) is mouse compatible and the user is able to carry on working while the labels are being printed. The SLP Pro prints what is on the screen and nothing else, hence the WYSIWYL label(sorry!) RRP £329.00.

Yes, we know you can produce labels from almost any Amiga W/P or DTP program, but somehow they don't look so pretty.

Contact: *Seikosha (UK) Ltd., Unit 14, Poyle 14, Newlands Drive, Colnbrook, Slough, Berkshire SL3 0DX. Tel: 0753 685873.*

AMIGA IN COLOGNE '93

Whether you are a dealer wanting to exhibit or an interested visitor, now is the time to make a note in your diary for the Amiga Exhibition in Cologne - the 5th - 7th November.

Under the new name 'Computer '93' the World of Commodore and the World of Games have united as a consumer exhibition to replace the two events held in 1992 at Cologne and Frankfurt. (And what a mess that was!)

The earlier Special visitor day (Thursday) is now cancelled to concentrate on the three busiest days from Friday to Sunday. From past experience it's really a Show worth going to, especially as a major part of it deals with serious Amiga applications which aren't always seen in British Shows.



SIMMS AND ZIPS PRICE EXPLOSION

The price of DRAMs has increased dramatically due to a fire at Sumitomo in Japan, one of the biggest epoxy-resin manufacturers in the world. Epoxy resin is a basic material used in the finishing of DRAM plastic covers. With the boom in demand for main memory chips for computers such as the 486 and, of course, the Amiga CD 32 and the rise in the US \$ exchange rate against the D-Mark, the DRAM distributors have been quick to react and increase their prices.

When this last happened a couple of years ago, Commodore was able to smile smugly at the world and announce that they had wisely bought in a substantial stock and didn't have any need to raise their prices. They haven't made any anguished comment this time so you can assume that they are not going to tell potential Amiga buyers to cough up more cash.

However, one third party Amiga supplier, we believe is giving out that smug smile. Germany-based, bsc have a quantity of DRAMs still at the old prices. If you want to buy a few...

Contact: *bsc Buroautomation AG, Postfach 40 03 68, 80703 Munich, Germany. Tel: 089 357 130-0.*

TWO INTO ONE WILL GO!

Brother have told *AUI* of what they claim is a breakthrough in network printing with the launch of a new 600dpi, 10ppm laser - the HL-10h with even a PCMCIA slot.

Users can now enjoy the benefits of both PostScript and PCL printing for the price of a PCL say Brother.

When data is sent to print the HL-10h automatically distinguishes between PCL and PostScript before printing. The HL-10h offers 2Mb of standard RAM expandable to 34Mb for £1,349.00.



MEDIA POINT

If you want to create, combine and synchronize graphics, text and animations with audio and video, MediaPoint 3.0, its creators proudly told *AUI*, offers the opportunity for designing interactive programs. Synchronization of audio with pictures and animation is, they say, made easy with a tempo control feature (using the mouse by tapping the buttons to make a rough synchronization, then fine tune it on a frame to frame basis).

MediaPoint is claimed to be suitable for video editors utilizing the antialiased fonts and line by line transitions, with NewTek's

Videotoaster, 24 bit cards laserdiscs and VCRs. Designers of time-based applications such as stand alone presentation systems or TV text channels may be interested in the three time code systems supported by MediaPoint.

MediaPoint is menu-driven, with pull down menus accessible by all screens and windows. It has been developed by 1001 Software Development.

Contact: *Activa International, Keilebergweg 95, 1101 Ge Amsterdam Zuidoost, The Netherlands, Tel: (310) 20 691 19 14*

**100
Million
transistors**

Intel is to spend \$30m (about £20 million) to promote the 486/DX2 chip and there is rumour of a DX3. Whilst Pentium begins its life cycle, its successor the P6 is nearly ready. The P7, Intel says, will complete the Intel conceptual framework it calls Micro 2000. By then the P7 will have between 50 million and 100 million transistors - the Pentium has three million - and four processors which will work in parallel. Those transistors will be used to bring what Intel calls 'natural data types' such as sound, image and video right on to the chip.

Intel is one of the world's most profitable companies. Last month the company announced it made more profits (\$1.1bn - a cool £600 million) in the first half of this financial year than it did in the whole of 1992 - which was itself a record year.

These days, as you can see, anything in computing is very big money indeed. Imagine how much the R&D is costing on the P7... And the mere 3 million transistor P6, the Pentium, is not even out yet in any quantity. It's a bit like Commodore finishing the AAA chip before they've even sold any double A chip based Amiga CD 32s. Which, by the way, whispers have reached us might actually be the case. But as yet they are not making £600 million profits in just six months. But who knows what can happen in this crazy computing world?

MAXTOR'S PCMCIA HD

Maxtor, the big US drive, people are bringing out a little box that slips sexily into a PCMCIA slot. Credit card size, it is, say Maxtor with some justification, a harbinger of all our futures, for it is a 105 Meg hard drive - the MXL 105III. Measuring just 1.8 inches, they claim it is the highest capacity PCMCIA drive yet with more than twice the capacity of any other similar device.

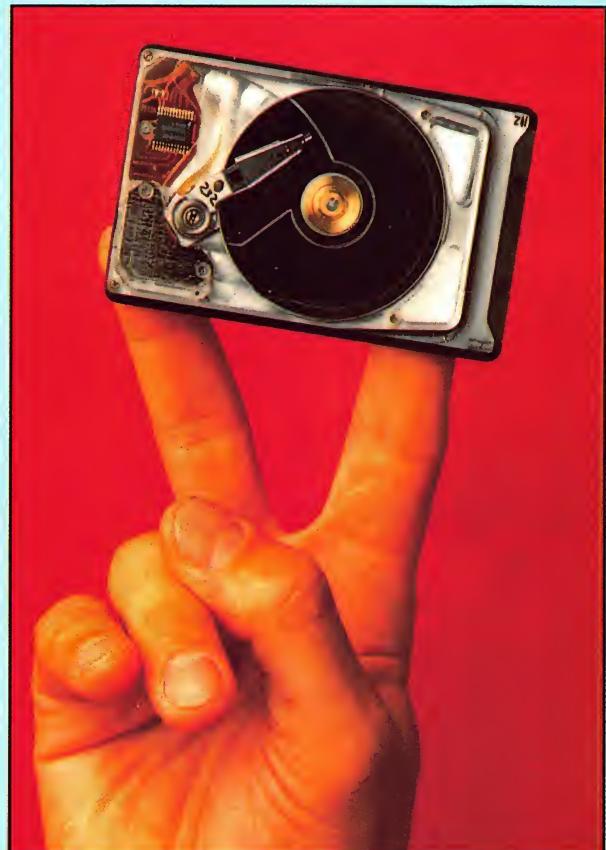
The tiny drive weighs in at a flyweight 2.5 ounces.. As a removable piece of hardware it's been designed to work in the ever smaller notebook and sub-notebook computers.

The whole idea is that you plug it in and then just swap it between computers at home, in the office or with someone else.

John Shaw, Maxtor's European Vice-President told **AUI** "The MXL-105 III gives users the ability to carry their entire desktop environment with them."

105 Megs, you gasp. Yes, the tiny-weeny thing you see in the photo takes that much. And it's no delicate little flower either.

It will, Maxtor told us, withstand 100 Gs of operating shock and 300, yes, 300 Gs non-operating shock. And even more amazing, they claim and with a perfectly straight face too, that "During operation, a sensor anticipates impending shock and ensures the protection of data." (Sounds rather as if your talking computer will tell you solemnly "In 5 minutes time, you're going to fall down the stairs but don't worry, while you're in hospital with your leg up in traction, you can still use your portable computer because the Maxtor drive has protected your data.")



Maxtor's tiny-weeny 105 meg wonder - carry your desktop with you

How much does this little Maxtor wonder cost? Well, Maxtor are being rather cagey about that. It is already being supplied to manufacturers to include in their machines - we believe Toshiba for one are taking it - but it won't go on retail sale until January 1995 and Maxtor appear to be waiting till they know what's around before they decide how much to charge. However much it is, we want one, especially if we can get it into the PCMCIA slot of the Amiga and make it work. But it's so delightful that we might even buy a Tosh just to get it.

**Contact: MAXTOR Europe Ltd, Unit 3, Woking 8,
Forsythe Road, Woking, Surrey, GU 21 5SB**

Tel: 0483 747356

A horizontal row of ten solid red circles arranged evenly spaced on a light blue background.

100%

**OK HD, YOU
CAN RUN BUT
CAN YOU
EIDE?**

COLOURFUL OPTIONS

Citizen Europe have a growing market share of 45% of the total optional colour 24-pin units sold in Western Europe and in a report by the market research group, IDC, have been confirmed market leaders.

Optional colour printers are monochrome printers that offer colour as an additional capability. They are popular for small business, educational and home users who might wish to upgrade to colour at a later stage.

According to the report the Citizen Swift 9 printer was the most popular model in the 9-pin optional colour segment.

**Contact: IDC UK LTD,
2 Bath Road, London
W4 1LN.**

If you want to find out what's new, have a great day out and pick up some bargains for Christmas, then come along to the

Christmas INTERNATIONAL COMPUTER SHOW



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CF64 4YN

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0726 68020**

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12th November to save time and money**

To: International Computer Show, PO Box 68, St. Austell PL25 4YB

Please send me _____ Fast Lane Tickets @ £6.
_____ Under 10's Fast Lane Tickets @ £4

I enclose a cheque / P.O. / Credit card details for £ _____ made payable to
International Computer Show

Name _____

Address _____

Credit Card No. _____

Postcode _____ Fax No. _____

Expiry date _____

OR phone 0726 68020 to book with credit card



DEADLY CRASHES

A BYTE IN YOUR LOCAL

By the year 2000 you may be popping into The Bit and Byte or the Meg and Ram for a pub lunch as the Brewer's Society predict a change in image for pub signs. In a contest, landlords from the UK's 50,000 pubs felt that the two most likely images to appear on pub signs will

reflect the influence of computers and Margaret Thatcher on society. (And we know which of the two which has done the most good!)

At present we know of no pubs named after computer technology and we can do without any called after the egregious Maggie too.

A very nasty sounding bug, Black Screen of Death, which causes system crashes when Windows and DOS applications are running together on busy NetWare local area networks, has been traced. It turns out to be due to flaws in Novell's NetWare's Vnetware. The bug was previously attributed to Windows. Novell says it is testing a fix. But MicroSoft,

creators, of the Amiga's much reviled AmigaDOS. must be quite relieved.

Though Windows has swept through the PC market, lots of people think it doesn't compare to the windows style interface that has been used on the Amiga for years. And why do these things always get such dramatic names? Thank goodness no Black Screen of death on the Amiga...yet.

Edit Mate

Meridian are to distribute a video editing system for the home enthusiast. Meridian say it will allow up to 99 scenes to be stored in any order and allows you to add sound to your video. The package includes software, cables and a stereo audio mixer and is claimed to be able to control most VCRs. If you can't wait for a review and are convinced already. Contact: Meridian on 081 543 2255.

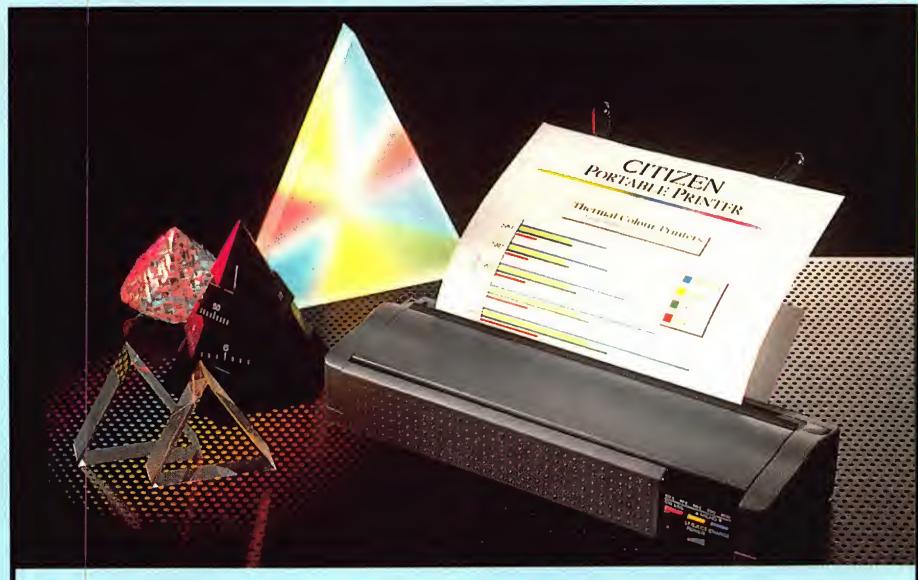
PEGGY MPEG

With the new Peggy MPEG decoder, the Amiga can use the latest technology of datacompression for moving images. 24 bit animation with 352x288 (PAL) and 352x240 (NTSC) resolution can now be read and shown at full speed, 25 (PAL) or 30 (NTSC) frames per second, from hard disk, CD ROM etc, with a transfer speed of 150Kb/s.

Peggy features a datacompression laid down in the ISO CD 11172 standard, the data is compressed to achieve near S-VHS quality. The MPEG chip which is used on

the card shows the datacompression with the integrated frame buffer at 24-bit colour resolution. An integrated genlock mixes the Amiga graphics and the MPEG video enabling an overlay of the MPEG video with Amiga graphics. An optional software package is used to produce MPEG bitstreams on the Amiga. Movietime!

Contact: Activa International, Keienbergweg 95, 1101 Ge Amsterdam Zuidoost, The Netherlands, Tel: (31)(0) 20 691 19 14



PASSIVE PLUG-IN

The ISDN-Blaster is a passive plug-in card for a computer's ISA channel. It can either be used on an 8 bit or on a 16 bit card lot. It facilitates the direct connection from a computer to an ISDN-telephone-network.

bsc's Fossil Driver creates a bridge between ISDN and traditional mailbox software which are not capable of supporting ISDN. In this way, the programs which are widely spread throughout the mailbox user community such as Front Door, Telemate, Remote Access SBBS, DBridge or FossilFile Transfer can be used with a maximum transmission speed of 7850 characters per second. The RRP is DM 899.00.(About £380). It is believed that Amiga drivers are to made available.

Contact: bsc Bureauautomation AG, Postfach 40 03 68, 80703 Munich, Lieferanschrift, Lerchenstrabe 5 80995 Germany

EDUCATING AMOS

The never ending stream of things to do with Amos goes on.. "Amos in Education" has been written to help AMOS programmers to understand what is needed to produce an educational program. (But does it mention having the mind of a child and an intimate relationship with Martin Witton?) (No, it doesn't! MW.)

It gives, say Kuma, all the information needed to produce an educational program from the initial planning stages to tips and tricks needed to make the program run smoothly.

The book starts by giving the full specifications, graphics and code for four

educational games and offers practice in writing by giving just the graphics and specification for a fifth game. The programmer can then go a stage further to add their own graphics and ideas before linking it to the main game.

It is, Kuma told *AUI*, particularly helpful for people wishing to supplement what a child has learnt at school by designing specific programs to practice and enhance computer skills.

Price £12.50, including a free disk.

Contact: Kuma Books Ltd., 12 Horseshoe Park, Pangbourne, Berks. RG8 7JW. Tel: 0734 844335.

CITIZEN ASSAULT

Citizen Europe has launched a portable thermal-transfer printer which the European marketing director, Edward Huggins, describes as 'the first wave of a major assault by Citizen on the non-impact printer market this year'.

The Citizen Notebook Printer II is aimed at the world traveller with a multi-voltage power supply and worldwide

availability of options and consumables to "enhance its portability".

It is designed to fit inside a briefcase alongside a notebook PC, and has add-on options such as a car adaptor and infra-red wireless interface. Typical applications include the production of on-the-spot quotations at a client's office or home or the preparation of a next-day's slide presentation

whilst away from the office. For desktop use the printer can handle up to 30 sheets of paper via an optional automatic cut-sheet feeder.

If the assault works it should prove to be a big 'hit'!

Contact: Citizen Europe Citizen House, 11 Waterside Drive, Langley Business Park, Langley Berks. SL3 6EZ. Tel: 0753 584111.

CHRISTMAS Computer Show

Westminster Exhibitions has announced that this year's Christmas International Computer Show will take place at Wembley Exhibition Centre from 19 - 21 November. The show focuses on the use of computers in the home and small businesses with, Westminster told *AUI* about 160 companies selling and exhibiting.

Contact: Westminster Exhibitions Ltd., The Cotton House, PO Box 36, Dinas Powys, South Glamorgan CF64 4YN. Tel: 0222 512045. Tickets from: 0726 68020.

Cornish Cam Club

Richard Anthony of Computer Generated Visuals, who specialises in ray tracing and other graphics techniques, has been holding mini-seminars for local special interest groups in video production. "The Amiga has a large following in Cornwall as a productivity tool" Richard told *AUI*.

If there are any groups of people (5 or more) who might be interested in attending a beginners' guide to the Amiga's place in a video production environment in Cornwall, contact Richard Anthony on 0209 717321 after 6pm.

HYPERCACHE

HyperCache Professional is a filesystem and device accelerator for the Amiga with performance increases claimed to be of up to 22 times on hard drives and 320 times on floppies according to Meridian who are distributing it for Silicon Prairie Software.

HyperCache Pro, we are told, "is an N-way associative look-ahead cache system for any block-accessible device." Yes, of course, you know what that is.

Hypercache employs a method of cache preservation known as the LRU algorithm, normally used on mini and miniframe computers in high-performance virtual memory system.

Caches are now becoming common though originally that were only used on high level systems. A cache means that the most often used operations can be stored in a "cache" (French for hiding place, as in "Cache-sexe" for those G-strings worn by striptease girls!) which saves the computer clock cycles finding them and speeds up the executions of operations.

Hypercache for the Amiga (all models 1000-4000), Kickstart and Workbench versions 1.2 - 3.0 with 512K of RAM. RRP £46.95.

Contact: Meridian Software Distribution, Tel: 081 543 3500.

ER AM O P to the Programmer!

Recently a "revolutionary" link library has been created for the Amiga produced for experts and novices, the Amiga Device Library (ADL), say its inventors, has been created with the mandate "Bring power to the Programmer!"

ADL is said to solve the problem of difficult or elusive system routines. ADL sports a BASIC-like command interface and has fully documented commands for ease of use. It comes complete with a large spiral bound manual, a disk of example programs, paper examples and the library itself. And, of course, according to Trinamic, plenty of power for those up-to-now powerless programmers.

Contact: Trinamic, Box 61, Group 6 RR 1B, Winnipeg, Manitoba, R3C 4A3 Canada.

DIAMOND CUT DOWN

One of the longest established names in the computer retail business has bitten the dust. The London Borough of Camden sent in bailiffs to one of Diamond's chain of nine shops, the branch in Tottenham Court Road, to collect goods in lieu of unpaid rates of £80,000. Creditors have asked for the Southampton-based firm to be put in the hands of receivers.

Diamond got into the business of mail order when the Amiga was just starting to make an impact. It made itself unpopular with its competitors by frequently offering products at what they thought were below cost price. But readers of a number of magazines, including *AUI*, contacted the publications to complain about the service they received and sometimes that Diamond seemed not to be able to supply the advertised products. Partly as a result of this *AUI* has not published advertisements for the company for over two years so no *AUI* readers should not have suffered in the crash.

The September *AUI* article on mail order attracted considerable attention. Our advice for readers is not blindly to accept at face value the cheapest price offered in mail order without checking up and possibly using a credit card is underlined by the regrettable fate of Diamond and the problems faced by anyone who has sent them money recently.

FRACTALPRO

6.0

FractalPro 6.0 is a new version of a professional-quality tool for creating fractal art and animations on the Amiga. Version 6.0 (priced \$199.95 about £120.00) takes FractalPro into the future of Amiga's AGA systems. It builds on existing capabilities of HAM6 and 24-bit rendering, 12 types of automatic animation sequencing, ARexx and JAHscript control.

FractalPro 6.0 retains compatibility for loading images and co-ordinate

files from FractalPro 4.0, 5.0 and 5.1. The optimized assembly language algorithms for speedy execution, VistaProDEM output and post-render script executions are all featured.

At the price it seems to be vastly more expensive than HiQ's popular Fractality but we hope to be able to review it shortly to see if the extra cash buys that much more.

Contact: MegageM, 1903 Aria, Santa Maria, CA 93454. Tel: 805 349 1104.

SCREEN SAVERS

Berkeley Systems, who brought the computers of our time the flying toaster which patrols the screens of Macs around the world, have come up with the Disney Collection Screen Saver. Berkeley told *AUI* that screen savers prevent the phosphor burn-in that afflicts idle displays and say that people like them because they are fun. It is now possible to get screen savers on the Amiga which include a very realistic version of the famous toasters - no relation to Newtek's of course.

Screen savers are not supposed to do anything but look pretty, as does Berkeley's bank account with sales from these harmless but comparatively useless things of \$18 million - £12 million - in 1992!

CHARTS & GRAPHS

V3.0

Release 3.0 of this popular program extends the utility of Charts&Graphs (\$99.95 about £60.00) as well, its creators claim, as providing the user with "a more aesthetically pleasing interface". And aesthetics we have found is not something that is too often in the forefront of the minds of power-lacking programmers (See NewsFile item on ADL) when they put together Amiga programs.

Several chart types have been added to V3.0 along with a QuickCharts window and Amiga OS2.0x style

windows and menus. In addition, several functions including cut, paste, copy and clear have been added to the Data Manager. With the inclusion of curve fitting, interpolation, high-low-close and control charts, Charts&Graphs, say its creators, goes beyond being a time-saving device and wins out over paint and drawing programs.

Contact: Technical Resource Systems, Laboratory, P.O. Box 94263, Las Vegas USA. Tel: 702 737 0880.

DIGITAL MEDIACASTER

Digital Micronics Inc., has announced a new MPEG playback board, the Digital MediaCaster (priced \$1295 about £850). The board will provide 24-bit colour, scaleable video, real-time decoding at 352 x 240 resolution and NTSC, PAL, S-Video and RGB analog outputs. Rumours of it reaching the Amiga in the UK abound but we haven't

found anyone with it yet. We hope - in fact the Barry McCarthys and Alan Puzeys of this world can hardly wait - that we can get one soon for review. But don't hold your breath as we don't even know of anyone in the US using it yet.

Contact: Digital Micronics Inc., 2075 Corte del Nog, Unit N, Carlsbad, CA 92009. Tel: 619 931 8554.

COMMODORE signs ICL

CBM has signed a major deal with ICL, the UK's computer largest service supplier. As a result of the multi-million pound deal, ICL will handle all pack building and configuration, systems support, warehousing and distribution to customers, distributors and retailers. ICL will also provide full and extended warranty service and maintenance including return for repair and home

visits from ICL customer engineers.

This means that ICL's 'Connection' - a control centre operating 24 hours a day through a single telephone call will be available to home based customers. ICL's service will cover Commodore's new CD ROM-based the Amiga CD32 as well as the other Amigas. Wang will continue to offer after sales support to existing Amiga owners.

LOCK UP YOUR COMPUTERS

Insurance industry estimates suggest that more than £90m of personal computers were stolen in the UK during the past year.

The latest case to be highlighted involves ICL subsidiary Technology - yes the ones who are going to service the new Amigas (see above) - whose PC warehouse in Warrington was ransacked twice in a matter of weeks.

During the first raid, in February last year, around £100,000 of PCs were taken. A second raid occurred just weeks later, when a further £400,000 of computers were stolen. Both raids reflect a growing national problem in computer theft, in which the high value and easy portability of desktop computers make them obvious prey for racketeers.

Only two weeks ago, Eagle Star Insurance announced it would no longer be offering cover for Apple Macs at a number of

graphic companies because of the soaring number of robberies. And in March this year it was revealed how Government offices were being advised to bolt computers to their desks because of walk-in thieves.

UK insurers' own estimates suggest that the number of desktop machines being stolen in the past year has forced a five-fold increase in premiums.

Owen Wallwork, spokesman for Computer Security Systems whose company is part of the Sun Alliance group, warned 'Computer theft has now reached epidemic proportions. But we're not talking about walk-in robberies. This is organised crime with specific machines stolen to order and then shipped abroad.'

If Amiga CD 32s get the high demand predicted for them they may turn out to be in short supply, why not try hiding them when you go out?

EMBEDDED CONTROLLER

An embedded controller is a microprocessor with a layer of software 'embedded' into it, which is designed to form a specific task. You have them in your home already no doubt in things like washing machines.

IBM have started selling low cost versions of the PowerPC processor to printer makers as a cut-down version of the full 601 chip, "designed for use in photocopiers and games machines, to reduce manufacturing costs." Oh yes?

Ford have announced plans to buy 6 million PowerPC embedded controllers from Motorola - IBM's partner in the design of the chip - to run engine management systems in

cars. So when you buy a Fiesta in a few years time, it might just be running the same system as your Amiga CD 32!



New genlock... not using up memory.

HAMA GENLOCK

The latest Amiga compatible Genlock from Hama follows on, they told **AUI**, from the 590 and 290 as software independent by not using up valuable memory capacity. It is suitable for either Hi-band or composite video signals and features four main types of output so the user can choose between

Amiga only signal, video only signal, mixed Amiga and video signals and key inverted mixed signals. All these outputs can be fed directly to a VCR and can also be faded out by the jet style control level on the 292.

Red, green and blue processing of the Amiga signal can also be carried out by the user by rotating the necessary control knobs on the unit. Bandwidth for the 292 is 10MHz. Contact: Hama PVAC Ltd., Unit 4 Cherrywood, Chineham Business Park, Basingstoke, Hants RG24 OWF.

Bandwaggoning

Nintendo ever willing to get on or off a bandwagon, have recently been running an advertisement that has latched onto the rock-bottom public opinion of the country's Prime Minister John Major. They have cut the price of one of their electronic handheld toys and promoted it with the slogan "A price lower than John Major's popularity." Not over-subtle that.

Even less subtle has been an announcement they have made about a future machine. Very much in the future..

Obviously naked and doubtless alarmed by the attention that first Sega with its 16 bit and now Commodore with the 32 have received from their CD consoles, Nintendo have announced a collaboration with Silicon Graphics, who make top of the range graphics workstations to launch a new console rumoured to be sold at under £200. It will, of course, be 64 bit and seems likely to combine cartridge and CD-Rom technology. Is that all?

Oh just one little thing, it's not going to emerge much before mid 1995. And you can bet on that...

If ever there appeared a genuine bit of vapourware, this would seem to be it. From Silicon Graphics whose nice little machines cost around ten grand? A combination of cartridge and CD-Rom? A couple of years away? Beam us up, Nintendo, the Starship Enterprise is coming to take us to dinner on Alpha Centauri.



Touch screen - on the sunny side of the street.

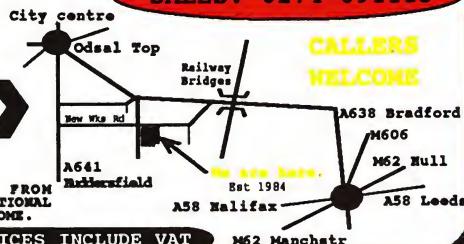
Here Comes the Sun

Lucas Decco's Sunlight Readable Touch Screen Display Terminal, designed specifically, they told **AUI**, for use in environments where direct sunlight is present, also functions in other ambient light situations. "The Terminal is completely sealed from the environment in a case of rugged aluminum." (Is there any other kind?), "and meets NEMA 4/12 standards." Oh really? Still it's an interesting mixture a touch screen that stops dazzling. (My bank's cashpoint becomes impossible to use in the afternoon when the screen reflects the sun like a mirror. Brilliant planning that, Mr Barclay, get a sunlight readable. . .)

Contact: Lucas Decco, 31047 Genstar Road, Hayward, California USA 94544 7831. Tel: 510 471 4700.

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A BRIGHTER FUTURE?

Star told **AUI** that an Amiga driver is being written for their new SJ-144 printer. They evidently know that in this colour conscious world, the Amiga users are an obvious market for quality hard copy. The launch of the SJ-144 brings thermal transfer colour printing with 3 pages per minute output for £569.00, a lower price, Star say, than has previously been available.

Thermal transfer printers produce mono and colour output which is generally superior to both inkjet and matrix printers but has until now been more expensive. However, through both "low capital outlay and low running costs", which Star claim is the case with their new machine, business presentation users - and affluent home hobbyists - are being wooed with the competitive price and the quality of the performance.

Contact: Star Micronics UK, Star House, Peregrine Business Park, Gomm Road, High Wycombe, Bucks. HP13 7DL. Tel: 0494 471111.

For a warm and colourful winter, put on some Star thermals now!

DREAM ON, HEWSON

A small step for mankind, a big step for the 21st Century...

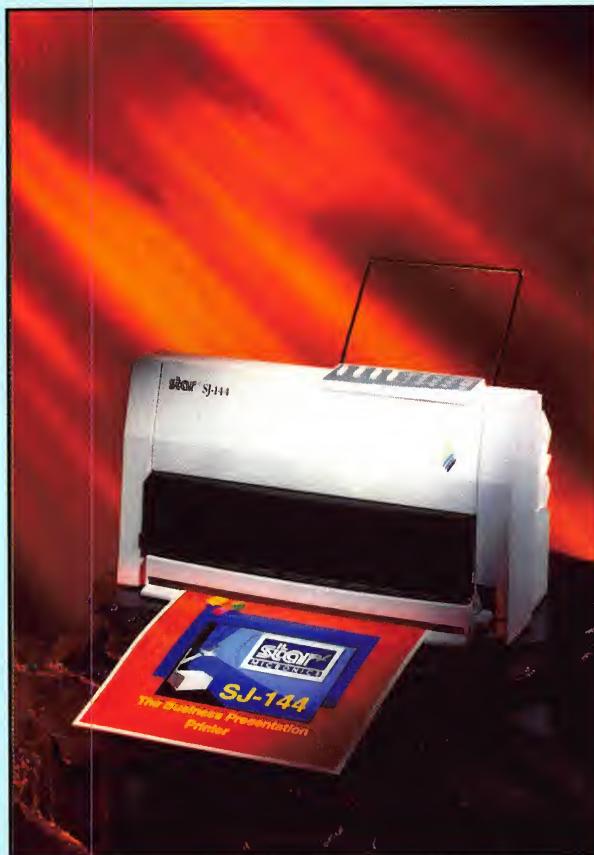
Pinball Dreams on the PC is the 200th release for Andrew Hewson, Managing Director of 21st Century Entertainment, which must a pretty hard act to match in this relatively young world of computer games.

Andrew Hewson's involvement in the games industry started over 13 years ago from his bedroom with the book 'Hints and Tips for the ZX80' while working on the computers of the Met Office.

He is best known for the classics shoot 'em ups Paradroid and Uridium. But he's keeping up to date with one of the first titles out on Amiga CD 32 with... Yes, you guessed it, a Pinball game. But in this case not a Dream, as on the Amiga, it's Pinball Fantasies.

Contact: 21st Century Entertainment Ltd., Westbrook Street, Blewbury, Oxfordshire OX11 9QB. Tel: 0235 851852.

21st century man Hewson ...from ZX80 to Amiga CD 32.



THE LASERBUDDY

Available it seems at present only in the USA, the LaserBuddy (priced \$249.00 about £160) is a hardware unit that conveniently attaches to any HP compatible printer. While the document is printing, the LaserBuddy automatically scans, locates and captures an address from within that document. A user may then print a corresponding envelope with a push of a button.

Sounds like a neat idea to save time and it should work with the Amiga, plenty of HP printers do.

Contact: Autotime Corporation, 6605 SW Macadam Ave., Portland OR 97201. Tel: 503 452 8577.

INTENSE HACKERS

A thousand hackers met at the "End of the Universe Congress" - The universe didn't end though. Did you notice? - near Amsterdam recently where the world's (the universe's?) first networked campsite was set up. The hackers from all over the world came to participate in workshops and informal discussions.

The advance programme told participants to "Bring anything that has a power cord or batteries and let's network it!". Many participants brought computers and Ethernet cards and many found that there was hardly room in the tents to sleep as most of the space was taken up by computing equipment.

Amazingly, the unattended equipment was not subject to a single theft, proving that the criminal subculture of the participants is reserved for the hacking business!

There were three Ethernet networks connected with six phone lines. Of course, there were a few teething problems for the organisers especially when they found that only one of the three rented generators worked. So the power was reserved for computer equipment, and the few that brought microwaves and fridges were asked to use the cafeteria.

The conventioning hackers used a variety of computers including of course PCs, Macs and an Amiga or two. But there was a Sun workstation and, believe it or not, even an old Commodore Vic 20 with a keyboard painted violet!

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A Bitchin' Machine

This time last year, the A4000 caused the biggest stir at the World Of Commodore Amiga (WOCA), but this time, the big C offered the new games machine, its CD32 to the American public to a generally muted response. Most of the people over the Pond (Commodore included) are looking towards Europe to dig the company out of the somewhat delicate position in which it finds itself. People are generally impressed with the technology and its price, but the lack of both machines and marketing funds at Commodore US, means the CD32 will be targeted at the European market first, especially the UK where the Amiga name is held with considerably more regard than Stateside.

The launch of the CD32 was coupled with the sensational resignation of Jim Dionne, who announced his departure at a dealer meeting on the last day of the show. Amazingly, Jim has been with Commodore since the days of the PET, right through the halcyon days of the C64 (during one quarter Commodore managed to sell \$235 million of the little beasties), and has held the post of President of Commodore US for some three years - a world record by his predecessors' standards!

Immediately all kinds of rumours started up about Jim going to the rival 3DO platform, but these are unfounded and the word is he is having a break and doing some "smaller things". Several cynics, noting the staffing at West Chester have pointed out "What could be smaller than Commodore US?". Atari is one answer to that one! One mischievous thought is the door is now open for David Pleasance, MD in the UK, to oversee the operations over in the States and get the CD32 ball rolling once things are up and running in the UK. Who knows?



Look carefully, its 1 Amiga connected to 3 monitors using 2 Picolo boards and software from EGS

While we're on the subject of 3DO, WOCA was graced with the presence of Dale Luck and Andy Finkel. The former is one of the original design team responsible for the Amiga, and along with the likes of RJ Mical and others, is now hard at it trying to get 3DO ready for that all important Christmas launch. Andy used to work at West Chester, mainly on AmigaDOS and it was good to see they were warmly welcomed into the fold of Amiga developers despite their "desertion". 3DO is still scheduled to ship in late November but at a price many feel is too high at around \$700. The list price of CD32 is around \$399 which compares very favourably indeed with the opposition.

The official line on the CD32 in the US is that a runaway success in Europe means that the initial supplies will, for the most part, find their way from the Philippines to the UK and Continent, with the big push in the US starting at the January CES show. The idea is that there will be 50 or so titles available and a bit of cash in the bank to do some advertising, although given the multi-squillion dollar resources of

Sega, Nintendo and the large backing of 3DO, who have managed to secure public flotation without even having a product, Commodore's new el Presidente looks like having his or her work cut out.

Times have been tough on US developers, those with the biggest problems being the likes of GVP whose traditional markets (hard drives and accelerators) have been all but wiped out by the A4000 and A1200, as these machines are generally so well specified and expandable.

niche presence in the vast video industry, courtesy mainly of NewTek and their phenomenal Toaster.

So to the Show itself, then, and those who didn't make it for whatever reason. It's become fairly usual for NewTek to either stay at home or go somewhere else with their gargantuan stand, but they seem to leave the Amiga shows to their user groups and magazines, and didn't even send us Kiki Stockhammer this time. (Shame!)

The absence of DTP supremos Gold Disk was explained by their wandering Mike Iampietro as due mainly to their recent move up to Silicon Valley (to facilitate Windows and Mac development) in the north, and also their lack of anything new to show! That doesn't mean they aren't working on their favoured Amiga products like Pro Page, ProDraw and Video Director, however.

Likewise ASDG who are now releasing their excellent Morphing package into the Apple arena and also looking at hitting the big time with a product for Silicon Graphics machines.

bitchin' machine

Many US developers are looking to other platforms such as the PC or Mac for some degree of security, especially given Commodore's flaky showing over recent months. No-one is really deserting the Amiga (except perhaps the major US games companies who only ever did boring PC games anyway), but there is a definite pattern emerging with people recognising the Amiga's

in'

Mike (My

other car's

a Cadillac)

Nelson

drags

himself off

the sunny

Californian

beaches for

some

investigation

of the World

of

Commodore

Amiga in

Los

Angeles.

Present though were the usual crowd of high performance characters like GVP, CSA and SunRize with some excellent new and updated products. The most exciting gear was the high resolution graphics boards, and already the market is crowded as people release EGS-compatible hardware with exceptional 24-bit resolutions.

EGS stands for enhanced graphics system and is a solution to the eternal problem of how a program supports several different display devices. Until Commodore bring out their new machine next year, truly retargetable will have to wait and this temporary emulation of Workbench/Intuition seems to work very well indeed.

Leading the field by a head and shoulders (at some cost) is the stunning Rainbow III card reviewed in *AUI* recently. The young German designer, Jorg, was on hand at the DKB booth to demonstrate this

monster with its baby brother Piccolo also in evidence. The latter is a Zorro II version so it will run on an A2000, 3000 or 4000 and, although not as powerful as the Rainbow III, it is perfect for video applications that don't require ultra high resolutions and instead need the full 24-bit palette.

The costs of these and other similar products is becoming very competitive and it is feasible to

have several boards in one computer - something the Scala people were eyeing with suspicious intent. After all, it's better on the pocket to have three display devices in one computer than three computers, and it also saves on mains sockets.

The Great Valley People have also released an EGS-Spectrum board and this seemed to cause quite a stir as for once it is slightly cheaper than the opposition.

Macrosystems were selling piles of Retina cards, along with the totally excellent TV-Paint 2.0, itself due an upgrade in the near future.

Picasso is yet another German offering from Village Tronic in the Germany and Expert Services in the US. This, they promise will provide the full AGA graphics support for A2000 and A3000 users via their own emulation system. The resolutions and colours available are largely programmable.



Jim Dionne, former US President
(of Commodore)

What's going on at Commodore?

Aside from the fact that US President, Jim Dionne, has just resigned, most of his keynote speech was an explanation of the disastrous losses incurred by Commodore over the last year or so. Commodore has quite a complex setup as the development stuff is done in the US, but not by Commodore US who are the guys in real trouble. Commodore International takes care of development and each country has its own company under the Commodore ("Chicken head") flag, with relative autonomy, but closely guarded by Mehdi Ali, the President of Commodore International.

Jim Dionne explained that the losses were due to four main reasons. Firstly, the global recession everyone keeps talking about is actually quite bad for the high technology companies, and secondly, the chaos of the ERM has left the dollar relatively well off (tell me about it!) so Commodore's stuff has become more expensive, despite selling well enough. The margins available on PC sales have been eroded by the vicious competition, and this was worth around \$250 million of business to Commodore in Europe. Finally, the success of the A1200 and A4000 machines has meant that significant inventory write-downs on stocks of A2000 and A3000's were necessary.

This summer, at least they are still selling Amigas as fast as they can build them - sales are up and this has been their saving grace so they were re-financed.

Lean and mean Commodore expect to do \$700 - \$800 million in business and actually turn a profit this year.

Commodore are farming out chunks of their operation to other companies, such as the warehouse and shipping parts, eventually moving from their aircraft-hanger sized HQ in West Chester.

Jim Dionne ended on an upbeat note by forecasting that the CD32 "would become our next C64 in terms of sales". That would take some 17 million boxes to get close - a formidable total and a lot of plugs...

On the subject of CD32, Commodore can't make enough to satisfy the huge demand and so are targetting the bulk of the 20,000 per week leaving the factory towards Europe, where they are thought to guarantee sales. A massive push is required to restore this status in the US, and that will wait until the January CES consumer electronics show, despite the rival 3DO being scheduled for release in November.

The A4000 has been a "resounding success", mainly due to the release of the Toaster 4000 from NewTek. Production of the flagship machine, and also introduction of the even more flagship tower version, has been upset by a combination of starting a new state of the art factory in the Philippines, with its associated teething troubles, and also the switching of the production lines to make buckets of CD32s.

continued

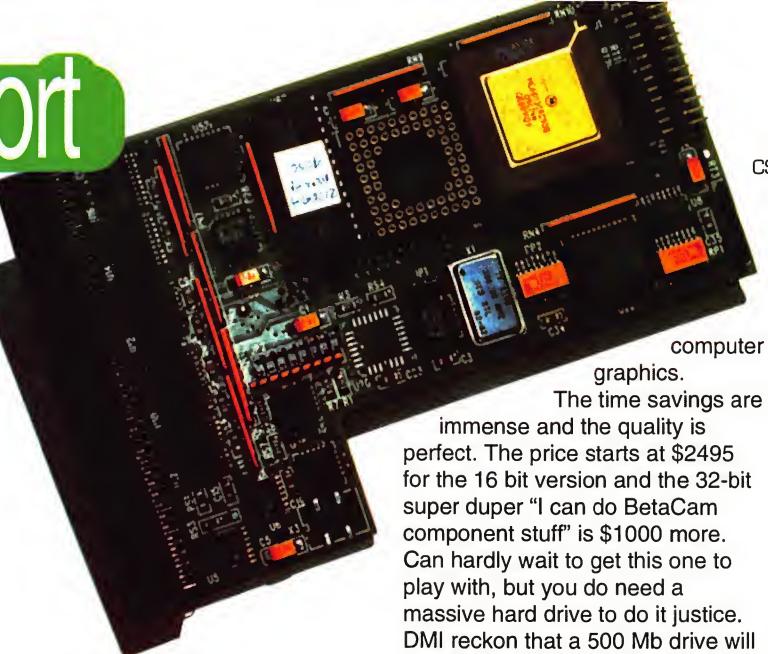
field report

A Bitchin' Machine!

more graphics

Digital Micronics were also present at the Show, promising yet again to deliver "in two weeks" one of the most long awaited Amiga peripherals since the PAL Toaster. Digital Editmaster has now turned into two products, Digital BroadCaster 16 and 32, and the delay isn't entirely due to DMI as they were among the first to use the JPEG chips and discovered a number of bugs in them!

Non-linear Offline Editing is the name of the game and the system uses an LSI logic chipset to digitize frames of video and use a JPEG compression technique to squash the size of the frame down to something manageable by a computer. You can select the amount of compression as this directly affects the quality when the frames are replayed. Using some



computer
graphics.

The time savings are immense and the quality is perfect. The price starts at \$2495 for the 16 bit version and the 32-bit super duper "I can do BetaCam component stuff" is \$1000 more. Can hardly wait to get this one to play with, but you do need a massive hard drive to do it justice. DMI reckon that a 500 Mb drive will only stash around 6 minutes of video compressed to 15:1, the limit at which artifacts become a problem.

Sound is also an issue to be dealt with and SunRize with their superb Studio 16 AD516 combination should be able to link directly into the Broadcaster via SMPTE time coding and therefore you can potentially preserve the

very nice, friendly software, the videographer is able to edit footage without having to wind through loads of tape, and then dump the result out to a final copy. Once the video is on the hard drive, it is also possible for the software ("DMI-601" for some reason related to the TV protocol) to add in special effects such as fancy transitions or overlaid

CSA's 12 gauge expansion for the 1200 makes the Amiga Bitchin' Machine.

sound track while adding in special effects, all in CD quality resolution. More on the SunRize guys later.

Also on show from DMI was their nice but pricey Vivid-24 display card, which uses the TIGA graphics system. Unfortunately, although the board has a lot of potential, the lack of software that makes use of the coprocessors makes it a very expensive framebuffer, although DMI are making arrangements to port Real 3D directly onto the board where it will render in almost real time... at a cost.

brilliance!

At last, Brilliance! from Digital Creations is shipping, albeit somewhat later than advertised, but nonetheless, this product looks set to give DPaint IV AGA a run for its money, if not displace it from its seemingly impregnable position of numero uno. Brilliance! has already

What's going on at Commodore?

lew speaks

Lew Eggebrecht is always on hand to fill in the pieces and we will publish an exclusive and frank interview with him next month. Naturally, when you are talking to Engineering, all the gloom and doom of the main company disappears in a cloud of hi-tech, pixels, colours and CD sound of the future. They are motoring onwards in search of that breakthrough machine.

Lew introduced the technical aspects of the CD32 as the next step from CDTV. The game controllers on the '32 are cleverly implemented, allowing up to 8 to be daisy chained together. There is special software in the ROM to interpret the buttons and convert the signals into more conventional events such as joysticks. Another intriguing thought is using the serial connection for Virtual Reality type inputs so a glove could be used as a way of communicating to the machine.

advantages

Lew pointed out the clear advantages of having

a high performance, low cost chipset which is both stable and known to developers (well, European ones at least). Tools for developing titles are in abundance and Commodore's experience with making CDTV disks is invaluable.

For the custom CD-ROM drive in the '32, Commodore took a fairly standard Sony mechanism and re-did the control hardware to gain the 2x speed advantage (although they haven't pointed out that this apparently isn't available over the duration of the whole disk!). Moving 300K per second makes for some excellent CDXL animations and there are also significant cost savings in doing the customising.

CDXL has taken a leap forward with AGA graphics and a 2x speed advantage, making

Video for Windows and Mac's Quicktime look very silly, indeed. Sporting 15 frames a second with a

three quarter screen animation, CDXL looks the part and has a number of advantages over MPEG, which also appears somewhat spectacular.

A half decent title takes around eighteen months to develop and this lead is seen by Commodore as crucial against the competition. Over 35 developers are now at work on around 50 titles so there shouldn't be any shortage of stocking fillers. Most of these are ported from the A1200, but a number are new.

triple a

AAA was mentioned in brief, with gasps of amazement from those unaware of the 10-20 times performance increase over AGA. Lew stated that as of the beginning of September, first silicon was in a development machine (dubbed the A5000 by Engineering, but that isn't necessarily the ultimate name of the box for AAA, especially when you consider that Commodore marketing could conceivably change it to something less logical).

The mega hi-res 24-bit screens are up and running, the 30x blitter is moving data faster than Linford Christie in a hurry and there are loads of bugs!

Lew is confident that a single revision will do the trick and a high end machine will hit the streets in about a year. Find out more about AAA in next month's *AUI* as Lew explains how things are progressing.

The A4091 SCSI-II controller has sold out, but fortunately for A4000 owners in search of the speed and power of SCSI may be served by another company taking over the production from Commodore. This is a trend for the future as Commodore move away from peripherals to concentrate on making new Amigas, which leaves the door open for their developers who have had some difficult times to contend with - witness the closed design of the A600 which shut out the likes of GVP totally.

The long-awaited DSP project is "within weeks of completion", but is currently on hold. Commodore is offering its considerable R and D on a plate (i.e. for free) for someone to complete, with the proviso that CBM reserve the right to take it back and stick the chips on the



Lew Eggebrecht up of CBM engineering.



CD32 draws in the crowds.

converted the awesomely talented Jim (Defender of the Crown) Sachs away from the EA product.

acceleration

Now here's a subject close to my own CPU, pressing the pedal in search of those extra MIPS or MFLOPS is always good fun. CSA

motherboard at some future point. Ethernet boards and that nice A4000 display enhancer are other projects that need adoption. Any offers?

Why are Commodore so stuck for development? It's partly because they laid off a load of people and also because they are doing other things like CD-ROMs (compatible with CD32) for the A1200 and A4000, so fear not if you want to play those fancy games and like your keyboard, all is in hand and things should be available in the next few months.

amigados 3.1

AmigaDOS 3.1 will be released very soon, containing an in-built SCSI file system (no more trashy IDE nonsense) and many of the special libraries for CD32 so you can emulate it on other machines. It should be around as a ROM/disk upgrade pretty soon and the Postscript thing actually works.

The blue sky RISC stuff is also extremely dear to Lew's own CPU, with considerable cost/performance benefits to be had - future games machines may not need to MMU, floating point and superscalar stuff of a \$1000 68060 (likely to be the last in this series, anyway). So RISC, with additional 3D-rendering hardware (possibly integrated) may well be the way forward for Commodore and they've been intensely investigating the possibilities. Windows NT is also on the cards for the Amiga platform and this does NOT mean that Commodore will abandon AmigaDOS - it's too cool for that, and besides, they have other plans, he said mysteriously.) RISC is not a question of "if", it's a "what" and "when".



Pagestream 3.0 on show.

have been shipping their rather delectable, if a little pricey 12-Gauge for the A1200. Although more expensive than the current competition, the 12-Gauge is incredibly well endowed in the power sense. Sporting two versions, one a cheaper, but upgradable 33 MHz edition and a blistering 50 MHz option, both offer up to 16 MB of RAM (if you can afford the SIMM which costs as much as an A4000!), a 68882

number cruncher and also a full-blown SCSI-1 interface for connecting external drives, removables, scanners or anything else that understands the language.

This little board really makes the A1200 into a "bitchin'" machine (to use L.A. parlance) which will spread manure over any 386, a lot of 486 clones, and outperform an A4000/040 in some respects.

GVP have not rested on the laurels of their A1230 and are offering a beefed up version running at 40

MIPS and a 128 MB RAM board. The DKB board will give you up to 128MB of Ram, but the Simm modules are \$6000!

transputer accelerator for doing parallel superscalar processing. It's hard to think in terms of 30 MIPS and several GigaFLOPs, but it's probably only one stage away from time travel as you watch your 3D rendering happening before you even think about your scene. No more waiting around for six days to find you got the light source in the wrong place - you just move it around in real time and see the effect on the render! Naturally this is some way off, but it will happen and you may be creating Jurassic Cemetery on your Amiga before long. You need some justification to do the software, a pile of money and a big power supply.

sounds great!

SunRize seem to have a worthy competitor with Macrosystems' new 16-bit sound card, but in all

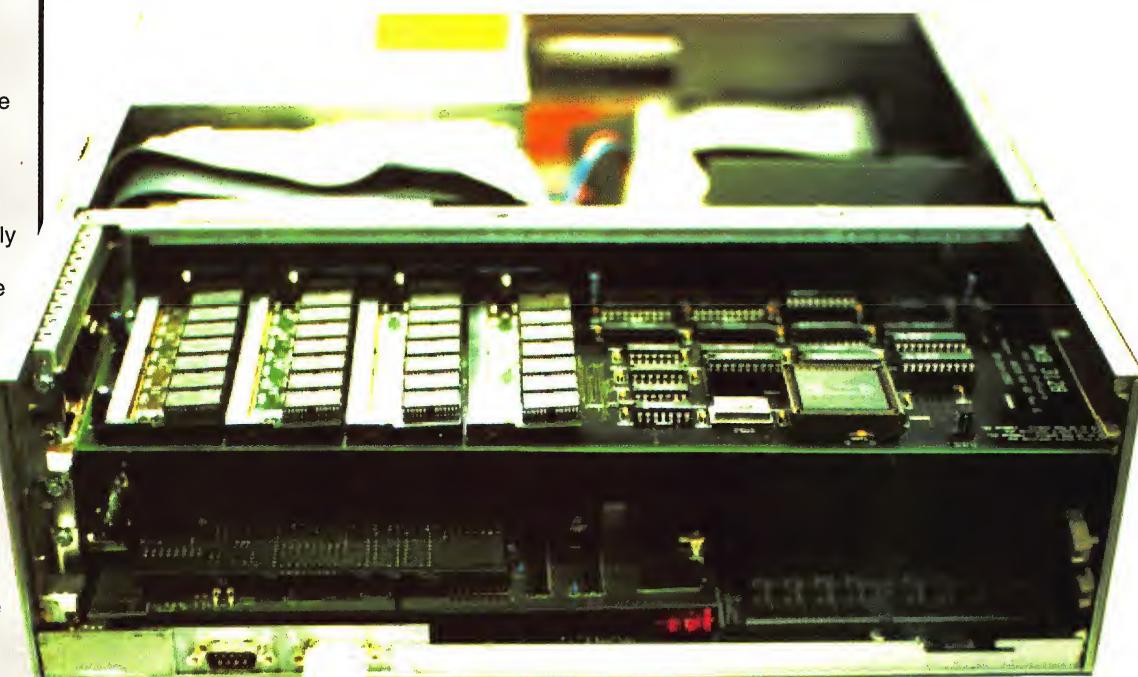


Dave Archambrant, ex CBM Marketing, with his replacement, John Dillulio.

MHz, but without the SCSI, which reduces the cost and isn't everyone's cup of Earl Grey, anyway.

Just when you thought it was safe to go back to single processor machines, along comes the US Cybernetics Inc with a prototype for a

honesty, the SunRize software is just so great that it'll take anyone ages to catch up, and they are moving another jump on the road to perfect sound with the release of version 3.0 of Studio 16. This greatly simplifies the construction of



A DKB board will give you up to 128MB of Ram, but the Simm modules are \$6000!

A Bitchin' Machine!

a cue list and allows you to add stereo CD quality sorix to your video, in perfect time too, if you have the SMPTE time code apparatus.

SoftLogik are making a serious play for the big time DTP market with Gold Disk's attention turned elsewhere, and the much anticipated version 3.0 release of Pagestream. Absolutely bristling with features and the most powerful ARexx script recorder yet seen on the Amiga. Unlike in ProPage, the SoftLogik offering actually builds for you an ARexx program (which you can subsequently play around with - what a great way to learn ARexx!) by remembering your mouse/keyboard selections.

A new style system has also been implemented to ease applying different font attributes to text and auto-kerning is another new feature. Support for the industry-standard PANTONE colour system has also been added. SoftLogik also claim to have succeeded in reverse engineering the ProPage file format so you can incorporate your old documents without losing all the layout details. TIFF and EPS are also supported as well as Final Copy, etc.

128 meg ram

DKB Electronics had some nice stuff on show. As well as the Rainbow III and Piccolo distribution for the US, their own home made gear is also worth a look. Their cunning MegaChip board for all those older ECS machines allows you to have 2 Mb of that all-important CHIP memory, so you can run Scala in all its glory, and have meaty animations or samples ongoing. In its third revision, the part is now smaller again than ever before, although the days of such products must be numbered with the proliferation of AGA computers.

The biggest RAM board of them all is also one of DKB's belters. A Zorro III card for the A3000 or A4000, it allows you to cram an awesome 128 Mb of 32-bit memory into your machine (in addition to any motherboard RAM). This is bigger than my hard drive and depressingly, the SIMMS are a massive \$6000 to fully populate. Even Windows doesn't need this amount of memory, and power users of 3D rendering packages are

LightRave

I Saw It But I Didn't Believe It!

Every Amiga Show in the States throws up some outrageous product that nobody thinks will work and yet has such amazing potential that everyone hopes they're wrong. Most of the establishment has had to eat humble pie when it comes to the Emplant board and its superb Mac emulation, although the promised 486 effort has yet to materialise. LightRave is another such such product, and I know for a fact that it works. I saw it, but didn't believe it.

The designers' audacity has to be admired, even if the ethics of the product are perhaps less than honourable. Imagine being able to take the Newtek's Video Toaster's award-winning 3D rendering system, Lightwave, and run it on an expanded A1200... The potential is vast, and this is exactly what LightRave does.

One of the biggest complaints about NewTek is that they won't release either a PAL Toaster, or a standalone version of LightWave as the program

requires the Toaster to work - some say (rather unfairly) it is the most expensive dongle in the business! Interestingly-named Warm and Fuzzy Logic Inc. have created a parallel port dongle, a software patch for Lightwave and timed things seemingly to perfection.

NewTek have just released version 3.0 of the program with their new Toaster 4000 and so there is an \$800 software upgrade around for dealers. In theory it is illegal just to purchase upgrades as you are violating the software licence, but there is nothing to stop you using a CSA 12-Gauge, LightRave and a Toaster upgrade to run the best 3D system on your lowly A1200. WAFL, the makers, would condemn this as an act of piracy and dissociate themselves from the action, saying you should only use LightRave with an official version of the product (in which case why would you need it?).

The whole matter does throw up all sorts of interesting questions and WAFL think they are safe from prosecution, but that didn't stop them sneaking into the Show under

cover of darkness and selling as many of the boxes (lots, in fact) as they could, in order to hire a lawyer... Unfortunately no NewTekkie was around to comment, but we'll ask them and see what they think. A tweak to the code could eliminate LightRave from future releases, but the damage could already be done. If anyone sees LightWave 3D on a bulletin board, our advice is to delete it as this does not seem in anyone's best interests.

In another intriguing twist, also on show less publicly, was a very nice PCMCIA Ethernet card for the A600 and, more importantly the A1200, which again had a lot of people excited about the potential cheapness of a Lightwave rendering suite based on supercharged A1200's. CSA tried LightRave on their accelerator and found that because there is no Toaster framebuffer to slow things down, the 'Wave, as it's known, actually works quicker than on an A4000/040.

realistically the only people who can justify this amount of cash, as playing Lemmings or running ProPage isn't going to tax the system to that extent.

New from Oxxi is another presentation program which goes beyond their excellent Presentation Master. Tuned more towards video/kiosk applications, VideoStage Pro is a kind of Scala which can be used to title tapes and also to do live presentations with Amiga graphics and animations for that "knock 'em dead" kind of impact. Fully AGA compatible, this looks set to be one of the significant releases of the summer and we'll be bringing a full review very soon. Oxxi programmer Gary Bonham was also eyeing up the DMI Broadcaster gear for possible future integration with VideoStage Pro.

The ingenuity of programmers never ceases to amaze, and Macrosystems are publishing an excellent-looking add-on for users of ASDG's Art Department Professional. Multi-Frame is a kind of user friendly front end allowing you to batch process files, design

your own animations or transitions for digital video effects, set up morphs and other effects (with Morph Plus) and away you go. The hassle of writing ARexx scripts is taken away from you AND you can save what you're doing very easily.

Something irritating about ADPro is you can only save the images, not really how you got them, unless you are an ARexx head. This new product appears to solve all these problems allowing you to be creative without worrying about ARexx too much. Could well be a crucial buy.

Scala is also due an upgrade and the multi-media version 210 is about to be upped to MM300 with a whole bunch of added features, new transitions, drawing tools, better integration of brushes and backgrounds, and the requesters show thumbnails of the files.

Conclusion

The Amiga is far from a dead or dying machine. Many people, including some developers who

should know better are saying all manner of things about how Commodore are pulling out of the Amiga, how developers are deserting it, and it's going to lose its serious side to become another console. This is complete dung! Even if the developers are including other platforms, no-one that I talked to was abandoning their investment in the Amiga.

AUI does not publish unsubstantiated rumours off networks - there is no need when the facts are readily available if you want them. The Pasadena Show was not as large as in previous years, but the quality of products on offer is without question, as is the commitment of both Commodore and the developers. Far from a dying machine, the Amiga has yet to have its heyday and if Commodore can keep things moving you will see new machines next year, further developments on the CD side of things, and possibly some amazing uses for the Amiga's heart and soul chips and OS, perhaps not even in a computer or console. A Bitchin' Machine? Find out more next month! **a**

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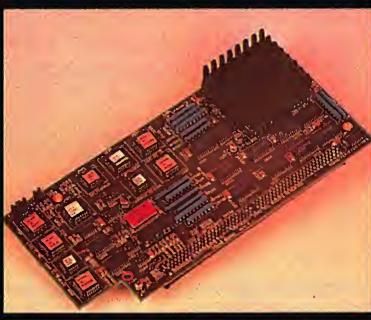
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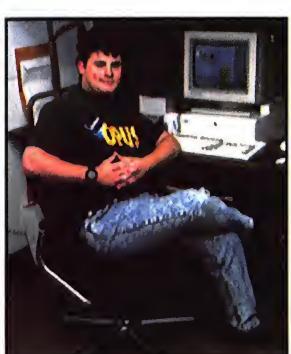
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field report

Roving reporter Mike Nelson goes to downtown Dallas, Texas and meets Tim Martin of Inovatronics - of CanDo and Directory Opus fame - who throws light on how the far from easy Amiga software world operates.

The name came from a previous company called "Inova" which sold a memory board for the old Osborne CP/M machines and Martin Murray was part of that company - it didn't last long, like the Osborne, really. In 1986 when the Amiga started up, Martin got hold of one and said "Hey the CP/M machines are dying and I want to write software for the Amiga", so Inova was dissolved and they started writing Power Windows [a super programming utility that takes much of the drudgery out of coding Intuition stuff].

"This was borne out the observation that there weren't any programming tools on the Amiga so we thought we'd better write one immediately. MCalc and Inova Tools actually predated Power Windows but we never did actually market



Scott Martindale, Art/Ad Director.

those as they got accidentally put in the public domain! Somehow Fred Fish got hold of them. CAPE the assembler was another product. I met Martin in mid 1988 and I came from a games programming background (the A**I 2600 games console) where I worked on something called Spelunker with my own

company Micro Graphic Image. That machine was going downhill fast so we ported Spelunker to the Commodore 64 and licensed it off to Broderbund Software (remember them, they used to do Amiga stuff a long time ago!). They in turn sold it on to a

Martin already knew Eddie Churchill. He had been a technical support guy at Commodore. He knew the market, is very smart, and he helps us bring the technical stuff down to earth.

Cash Foley, the fourth partner, was working with

without some of the features we wanted, but it worked and people could make some useful things with it.

"We had great difficulty convincing people about Cando and what it could be used for...It's a hard product to describe. When people

assembler. Anyway Cando's not like that, with lots of weird symbols and stuff. We got really quite frustrated at the lack of enthusiasm for people writing their own applications. AmigaVision came out 6 months after us as the official authoring

COLORADO

Japanese company for the Nintendo, long before they were over in the US - it did well over there.

I got a new Amiga from Commodore when it came out, although I was teetering on the verge of getting the new A**I machine. Once I found out Jay Miner had done the Amiga, that was it. It's weird that he ended up doing chips for pacemakers. Anyway, I saw Power Windows and

was real impressed - I'd also worked on the Apples and knew a bit about Hypercard, and figured the Amiga needed something like that, so I got together with Martin and we hit it off straight away as we were both Assembly language programmers. We had a lot of the same ideals with regard to programming.

me on Spelunker and then we brought him in to work with us on Cando. The three of us were assembly programmers and Eddie (we call him the "Ideas Tsar") who provides the glue to stick everything together."

What was the original design goal for Cando?

"The Amiga is a fantastic machine, just real complex to use. We wanted to bring the programming down to the level of the average user. Just make it easier to use. We approached Commodore about funding the project, but they had already started work on their own idea, AmigaVision which cost them hundreds of thousands of dollars. They told us "you might want to work on something else as we've got something already".

"We wrote Cando... and it came out in 1989. Almost as soon as version 1.0 shipped we released 1.022 as there were a few bugs initially, but this was a stable version - maybe

call and ask about DPaint, they say "It's a Paint program" which people can relate to immediately. We had to educate the customer. After the initial surge in sales, things tapered off quite rapidly and we found out that people just didn't understand what Cando was about. Here in the US we sent off copies to magazines and they would print reviews based on the back of the box, or the flyer without hardly looking at the software.



Kim Atchler, a happy assistant at Inovatronics.



Cash Foley, programming chief. system, and that lead was important to us. Going back to the press... AmigaVision was easy to use to create a slideshow, but Cando is so much more powerful than

that with the database functions, the arrays, floating point maths, the cool parsing/ expression system.

Scala then came out as the best presentation package so Cando needed to stand out. By this time, we were getting more of a feel for our likely customers. If you wanted to write a simulation for a piece of equipment, Cando was the tool to use. Other

applications include a specialised editor with maybe multiple windows or a HAM screen, or ARexx. Actually Arexx is so important for Cando and the Amiga. I don't know how many people have written front ends for batch processing files in ADPro. This additional support of ARexx in release 2.0 is the thing which helped to distinguish us from Scala and AmigaVision..."

Where does Directory Opus fit?

"One of the dealers had some sort of a half legitimate copy of Opus from one of the Commodore reps. We had a look at it and decided to call up the author Jonathon Potter in deepest Australia and

area. We have a good distribution network established, and another avenue is to supply product from other US companies, or even bring stuff in the opposite direction - we got hold of the HI-T Tower from Checkmate (just a little late as the price of the A2000 plummeted!), also there's GigaMem and AVideo we acquired that way. There's a lot of good talent in Europe and the Toaster people are clamouring for GigaMem for those big rendering sessions, especially now there's an O40 version."



Eddie Churchill, produce development manager.

already had a Toaster there for some of their video work, so they got the Amiga's foot in the door. This is really the only way that Amigas get into corporate America - always in through the back door.

"A local anaesthetist is using Cando to generate pre-operative assessments on his patients. His Amiga, a touchscreen and Toaster with a custom cabinet were located in the admission unit and a study comparing it with conventional paper questionnaires (collecting data on smoking, previous surgery etc), showed the recall of the patients using Amigas was much better, took less time and people power. People are discovering what Cando can do for them!"

"There's a guy who used Cando to teach Aborigines English, with games thrown in for good measure. The Police training video in Scotland

PRODUCTS

CANDO: This is their flagship product and is a program which is very tricky to define easily. To call it a programming environment is doing it a great injustice, but likewise simply labelling it as a presentation/graphics scripting language is just inadequate. Cando is designed for relative non-programmers to generate applications quickly and with the minimum of angst.

The latest news from Texas is that an upgrade (2.51) with full support for the AGA chipset and 3.0 operating system has just been released. Further enhancements include use of the standardised ASL requesters, AmigaGuide on line help and MED music file system. We will review this in the near future.

DIRECTORY OPUS: Arguably the best Workbench utility around. This program places all the file handling and manipulation facilities you will need at your fingertips. Almost crucial for hard drive users, and the current release, 4.11 supports the AGA chipsets for you A1200/4000 owners.

EDGE: This is a new product about to be released. A fully featured text editor, written mainly with programmers in mind, and with a standard user interface to rival TurboText or features such as CygnusED it should be a winner.



Jim Nelson, enjoying his work, special in Cando. In many ways they suffer from the same problem as Commodore in trying to educate the customer of the need for their product. It has always been the case that once people are introduced to the Amiga, or Cando, they soon warm to the obvious advantages of the systems. The big problem is getting that foot in the door which often means overcoming the ingrained blinkered approach of many IT managers who simply don't want to know if the hardware doesn't run Windows or whatever. It's frustrating for all out there, but then the Amiga has never had it particularly easy in the world of grown ups, has it? **a**

BOUND!

asked if we could publish his program. "Sure" he said and it was as simple as that - we launched it in the Amiga show in Cologne, October 91."

"We were astounded by the number of people visiting the show and it was like "What are we doing in the United States?". Berlin, '92 sealed it for us and Martin moved over there, established Inovatronics GmbH and we've been trading for just over a year. We have technical support in Germany, we're doing upgrades and just selling stuff."

"Europe is a big market and America is changing. Australia is another untapped

Who's using Cando in a professional environment?

"Locally we have ARCO, the Oil and Gas company. They started using Cando over a year ago. We sat and talked with their training people over there, and they were using video tape and such like. They wanted to do interactive stuff with a computer and they

was done with Cando and there's a huge French educational project ongoing too. Custom front ends for the likes of Toaster and ADPro are being designed for non-computer people who don't even know about files. One really wacky deck was a genlocked piano tutor which put your hands over a keyboard. Then there's Andrew Gould in the UK, the dentist guy (And **aui** reviewer! ED) - he sent us a deck which showed up a bug and it was full of these gross pictures of dental diseases. Man that was weird!"

"I want to find or create a niche for us to make a whole pile of money, so we can move the company to Colorado which is a much nicer place to bring up the kids. This image thing is why we increased the price of Cando and redid the packaging. It's a very powerful tool and that simply costs money. Professionals will pay for such tools - you can't stay in business selling \$50 products, the market isn't big enough. Even at \$200 it's a bargain, but people don't take it seriously enough - if we charged \$500 they may take it more seriously, but less would buy it."



Inovatronics HQ, Dallas, Texas.

Conclusion

The name Inovatronics seems to me to be well deserved as these guys really have something

Tim Martin, President of Inovatronics.

CONTENTS

The Tests: *The test procedures explained. We test the visual accuracy, clarity, sound and much, much more.*

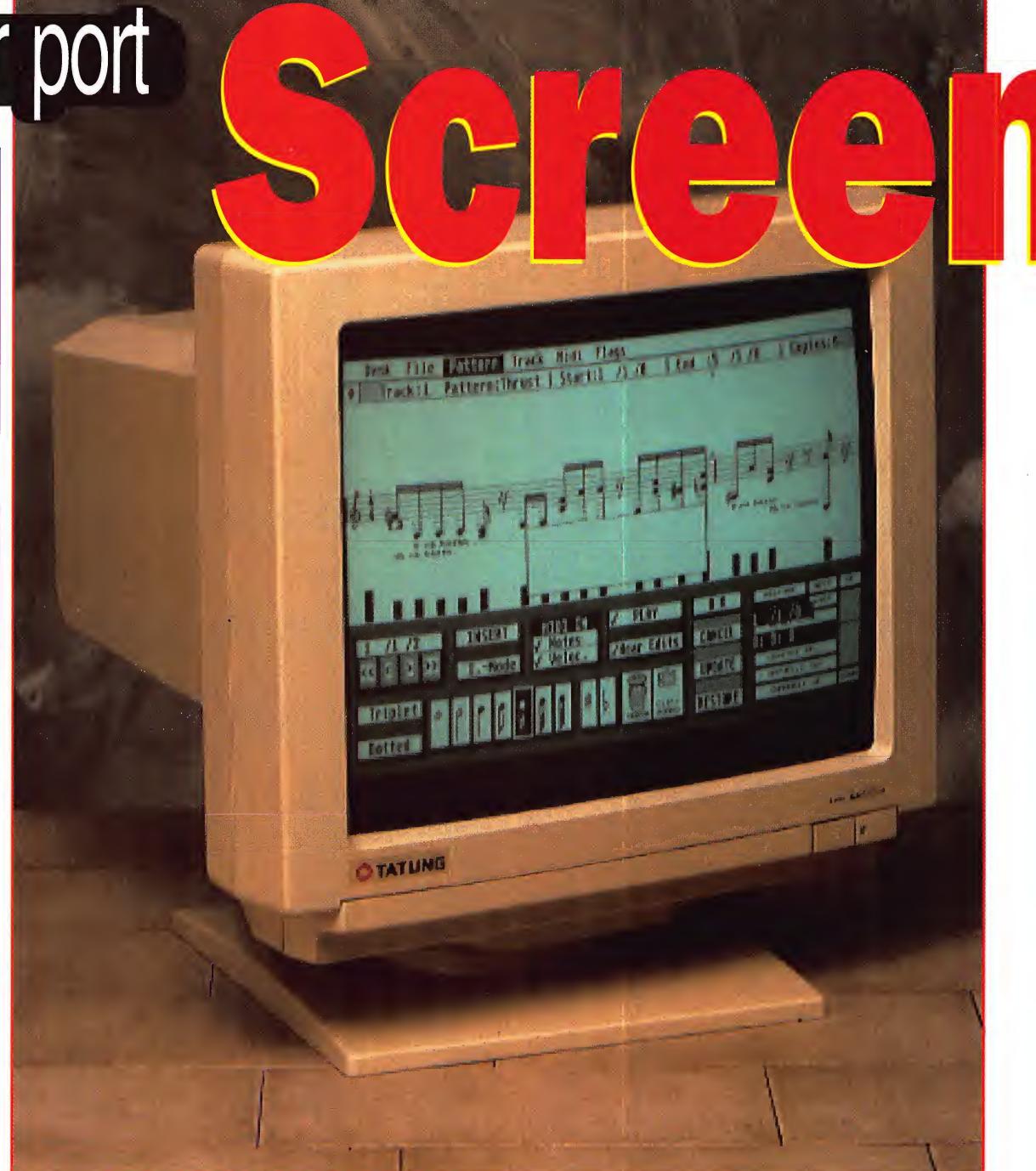
Reviews: *Each of the eight monitors examined is test driven in detail: Commodore 1940 & 1942, Philips 8833 Mk II & 1084S, MicroVitec CubScan, Commodore SVGA.*

Those Problems Explained: *EEC regulations, radiation, health problems and more. Everything you need to know before throwing the switch.*

Easy Access: *That jargon explained, just what does a sync do, does this explanation hold water, can this joke get any worse?*

Comparison: *Every specification you could want for all eight monitors, all laid out in an easy to compare table.*

Analysis: *After all the tests have been carried out and you understand the technology, which monitor should you spend your hard earned cash on and why?*



Eight monitors have been put through the Amiga User International test labs this month. Over the next six pages the AUI team led by Alex Standish explore monitor technology, compare them for picture quality and identify the monitor which best suits you.

The Amiga has come a long way over the years. Originally, when first launched it was a business machine but most Amiga's were used for games, and a small percentage of users ran the occasional serious application. Today however, increasing numbers of users, you and me, are using our Amigas for far more. Now word processing, desktop publishing, 3D rendering, and spreadsheets are common applications on most Amigas. Naturally of course, the odd game is still found (!).

To support this wide variety of uses the Amiga has always had outstanding graphics capabilities. And so, not surprisingly, the display with which you view these pictures will have dramatic effect on how good they look. Even more so, with the new AA chip set and its pseudo photographic displays. TVs may be okay for occasional use, but if you're using your Amiga for anything more than an hour a day, you should consider investing in a monitor. Using a monitor will throw new light on your games, pictures and applications. Colours will appear brighter, pictures will be

sharper, and, in some cases, you'll increase the amount of information that can be displayed on screen at once.

So, assuming you're in the market for a monitor, how can you choose the monitor that's right for you? What does all the jargon that fills the advertising pages mean? Which models take advantage of the new photographic quality displays of the AA Chipset, and which don't the others? Have you ever wondered how a monitor works and what makes them tick? If you do understand the multitude of words that surround monitors, what

Stars

about the specifications? Most suppliers present their particular monitor specifications in a completely different manner to that of the competitions making it near impossible for you to compare them.

Ta Da... Here courtesy of **AUI** is all the information you'll need to pick the right monitor for your needs. Here are the results of taking eight of the most popular Amiga monitors and submitting them to a barrage of tests designed to find the best Amiga monitor. The jargon is demystified, specifications compared, rigorous tests explained and the advertising waffle (advertising was once described as "Legalised Lying") cast aside. At the end of these pages, you'll have all the information you could want, backed up with conclusive tests and final analysis to identify the best Amiga monitors in the market.

which monitor?

This article started off with the simple intention of bringing you, the reader, the definitive answer to your monitor buying decision: Which monitor is the best for the Amiga. Common wisdom would say that by picking the monitor with the highest specification should give you the best monitor for your needs. But, as always, life isn't that simple. You opt for the high end, and go for an all singing, all dancing SVGA monitor. However, SVGA monitors are built for the PC market and PCs have one or two major differences to Amigas.

The low Amiga resolutions for example need a scan rate of 15KHz. PCs don't, in most cases, generate such a low scan rate so SVGA monitors often can't handle the low Amiga resolutions - end of that idea.

If you pick the cheapest monitor, you'll find it won't be able to handle the flicker free displays of AA and ECS Amiga's - making the cheaper monitors pretty useless for serious work.

So what do you do? The answer lies ahead. Rather than just pick one overall winner, **AUI** has selected a winner in several different classes. This gets around the problem of having one monitor which wins for its picture quality/range of features but wouldn't support all resolutions, or vice versa. By classifying the winners in categories, Games, Serious, Budget, and Overall you thus can pick the class relevant to you and know that the winning monitor is the best of its class for your kind of work.

test procedures and how does a monitor work

Before testing the various monitors we wanted to define a set of tests for Amiga owners that would, once and for all, find the best Amiga monitors. So with the aid of a friendly monitor engineer, colour expert and some sophisticated test equipment we put the various monitors through the most stringent tests ever seen in the Amiga press. The end result gives a single figure used to compare the monitors. The final index figure is the price divided by this result.

The test environment was tightly controlled. Light reflection on a monitor screen can drastically change many key elements of the display, as can the colours of any reflection. Also, the colour of the lights used to illuminate a room can change the way we see colours from monitor.

To negate the effect of external interference on the monitor display the tests were carried out in a colour critical 'pre-press' room. These rooms have Philips D5000 lights (as near to natural light as possible), there are no windows, and all walls,

desks and surfaces are grey to prevent any reflection. Many thanks to Silica Systems for the use of their Pre-Press suite in these tests.

Before any monitor was tested it was left to warm up for two hours. Then each monitor was tested with three bench tests. The first being image size regulation. This test involves running software which draws a white line around the edges of the screen, the line has a thickness of 1 pixel. Then to make life fun, a white solid square was flashed inside this square.

By doing this, the outer line may, in poor monitors, move. The extent to which it moves tests the image size regulation, which in turn reveals how well or not, as the case maybe, the monitor internals cope with variances in brightness. The movement was measured in 100ths of a millimetre. The amount of movement was multiplied by 100 and subtracted from the final index.

The next test was for colour accuracy, ie how well the monitor reproduces a specific colour. This test involved creating a continuously consistent colour or range of colours and then displaying it on each monitor. The display is then measured and the result compared to a Barco ICD 651 monitor. The Barco monitors in question are, in layman's terms, very very high quality monitors (with a price to match!) and are used in colour critical pre-press environments. The difference is measured in a scale of 1 to 10 (10 being inaccurate) this being taken away from the index.

The last test was to spot design problems. A one pixel width line was displayed, the intensity was then increased from low to higher intensities. In well designed monitors changes in intensity should not change the width of this line. If they do, there are possible problems. To check the line width a graticule was used, the graticule in question being accurate to 0.5mm.

The results were subtracted from the final figure.

To test the sound produced by the speakers of the monitors, a standard sound signal was reproduced on all the monitors. The sound generated by the speakers was then sampled and analysed. The analysis produces a figure which is added to the final index.

The tests were designed to show not just which monitors offer the best in terms of quality display, but also which were most practical in real world use. For example, whilst monitor B may have superior resolution, it's useless if the display is so dull you can't see the picture! Or how easy is it to adjust the various configurable elements of monitor? Where are the Brightness and Contrast controls etc.

For these purposes a further set of four tests were applied.

Ease of access: Every monitor, no matter its specification has a number of controls which are vital to daily use - on/off, Brightness and Contrast. How easy are these to access? Each of these three controls wins the monitor two points for being at the front, one point if on the side, and half a point at the back.

Tilt and Swivel stand: A minor point, but in daily use you don't stay in the same position, you move around left and right, forward and backward. Your monitor position should be easily changeable to reflect your position. A tilt and swivel base is easy to produce, relatively low cost, has an considerable impact on your comfort but also frequently missed out. The inclusion of such a base wins a monitor another point in.

All the monitors were tested on a variety of Amigas, to ensure compatibility or not, including A500, A600, A1200, A1500. A score of between 2 and .5 points (added) was given for compatibility with all Amigas, one point for AA only, and half a point for Amiga 500's etc.

WHAT MAKES YOUR MONITOR TICK

You may know what dot pitch and SCART mean, but do you know what goes on inside your monitor?

The monitor has its roots in technology developed many years ago, getting on for almost 100 years ago in fact! Firstly the signal from the computer has to be converted to voltages, the quality of the circuitry that does this conversion is directly responsible for the definition of the picture. Now the clever bit. These voltages are then fed to a further circuit at the narrow end of a large glass funnel shaped object. The voltages and current are passed through a filament which heats up accordingly. As it heats up electrons come off the filament.

Inside the funnel are positive charged electrodes, and the poor little negative electrons produced

by the filament have no choice but to be attracted to these positive electrodes. (Sexy, isn't it?) Even worse, there are other electrodes which this time are negatively charged and repel the electrons. By careful positioning these various electrodes attract and aim the electrons producing a compressed beam. A final electrode ends up by zapping our poor beam of electrons, kicking it up the backside and effectively speeding it up sending it flying off towards the front of the funnel, ie the screen.

When it reaches the front it strikes a phosphor layer, and the phosphor glows brightly. There are three different types of phosphor (one to reproduce each of the red, green and blue colours) and by changing the intensity of the electron beams (and how brightly the phosphor glows) any colour can be produced.

So we have a beam which flies up the funnel and strikes phosphor producing the colour. But how does a tiny spec of colour turn into a full picture? Well the beam lights just one pixel at a time, and the beam is moved from left to right, top to bottom. By drawing every pixel on the screen, and moving across and down the screen a complete picture is made up. After a period of time, the glowing phosphor stops glowing and the pixels must be redrawn, so the beam must draw the complete screen area before the very first pixel has stopped glowing.

And there you have it, in very simple terms the mechanics of a monitor. Oh, one final point. Inside a monitor the voltages used are very deadly, far, far more than your Amiga, so never ever go around messing with the insides of a monitor or TV.

When researching the tests we spoke to all major monitor manufacturers active in the Amiga monitor market. We also contacted several large dealers, Amiga specialists, and developers in the Amiga video market such as Silica, GVP and Digital Creations. From these discussions we compiled a list of 20 possible monitors suitable for use on the Amiga. Now unless you have an extraordinarily large desk or sell desktop real estate you won't fancy having 20 odd monitors on your desk.

So, more research was carried out, we sampled a random poll of recent monitor buyers and identified the eight most popular Amiga monitors and it's these eight monitors that we put through the various tests to find the best Amiga monitor.

Testing T

Philips 8833 Mark II

The 8833 Mark II is a considerable step up on the old 8833 (upon which the Commodore 1084S is based). It has a high quality display, that constantly delivers the same crisp,



No stone is unturned as we put 8 monitors through their paces

clear picture. It has the same dot pitch as the 1084S, but our tests revealed a better quality picture with strong focus and bright colours, it also revealed a better image size regulation (although only just).

It does not work with the AA or ECS chipsets, and also also achieved a good score for sound.

Commodore 1084S

This monitor is the cornerstone of the Amiga monitor market. Badged by Commodore (originally the Philips 8833) this monitor was designed to be THE Amiga display. A long serving element of almost every Amiga 500 and 600 system I know, the 1084S has carved itself almost a cult status in the Amiga market. Until the A1200 and A4000 come along with their AA chipsets the 1084S provided Amiga users with everything

they could want. Its built-in stereo speakers, Amiga matching design, good display and low price made the 8833 Mk II the monitor of choice for thousands and thousands of Amiga anoraks and lamers alike.

Sadly however, it only displays the lower resolutions of pre-ECS (Super

Hi-res, and low resolutions) and not the AA resolutions. As such its days are probably numbered. But for playing games and the odd bit of word processing it's still a dam good buy.

Commodore 1960

Technically this monitor is no longer available, but many dealers still have stocks and are selling it at very low prices. It was priced at a staggeringly high £562, which hardly compares given today's prices of the 1940/42 for example, strange being that it was a Commodore product! If you can find it from a dealer at a more appropriate price then it does offer one particular advantage over many others - it supports all Amiga modes - from the lowest to even the new AA chipset modes. Although our tests showed that its display is inferior to that of the newer 1942, which also do this. The lesson is simple, it's an inferior monitor with an uncompetitive price.

Philips 7CM3209

A surprise entry. Like the 1960 getting hold of this monitor is getting difficult, but unlike the 1960 its got et a lot going for it. It's well upto scratch for handling flicker fixed, ECS and AA chipset modes and also has a low price (probably because it's only available in very limited quantity). It can't handle the lower resolutions - unless you chuck the Amiga video signal through a flicker fixer first, but for technicians who want a low cost way of using AA modes this is a recommended model.

Commodore 1940

One of two new monitors (the other being the 1942) from Commodore. The trusty 1084S will be remembered fondly



em Out



to replace the older 1960. Both support a wide range of scan rates, being compatible with both lower resolutions and the ECS/AA resolutions as a result (15.6KHz to 15.8KHz and 27.3 to 31.5KHz) and they are therefore ideal for use for most applications and games.

Commodore 1942

Identical to the 1940, the only difference being a better dot pitch (.28mm compared to .39mm) giving a superior picture. A surprising difference is in the sound, in the test model the sound seemed a little weak, although we're assured that this was a one off blemish.

Both the 1940 and 1942 come with a built-in cable that has a SVGA style, 15 way plug already attached. To connect this to the Amiga's monitor port an adapter is supplied. A little kludge solution, but as they are Commodore monitors for the Amiga, why do they have a PC style lead in the first place? Don't Amiga users deserve a little bit better than this from Commodore?

To take advantage of the resolutions possible on the 1940 and 1942 Commodore have released a disk containing revised

They also have built in stereo speakers, with a volume control at the front, which during testing produced loud, clear sound. In fact, the sound was superior to that of the 1084S. Also of interest to the those comparing it to the 1084S is that it has a tilt and swivel base.

The monitor of choice for AGA users

This is supplied separately in the box and needs to be fixed on using four small clips. At first we were sceptical of the stability of these clips but, to my surprise they proved more than strong enough and that was after a lot of pushing and pulling!

It has a far superior picture to that of the two single scan monitors reviewed here, the 1084 and 8833, and in all the tests came out with a higher (and thus better) figure.



drivers. This disk is not supplied as standard with either the 1940 and 1942, but if you contact your dealer they'll be able to supply it. The only question is, why isn't supplied as standard?

Above: The 1942 has a slightly better dot pitch than the 1940

Left: The rear end of the 1084S

Tatung VGA monitor



A bit of an odd one this. For starters it's only monochrome. It's being pushed into the Amiga market on the premise that you already have a

THOSE MONITOR UPGRADES

Believe it or not, just like you can add numerous expansions to your Amiga, you can do the same for your monitor. You may have thought that you could just buy a monitor and never have to worry about it again. But you'd be wrong. Like everything in the computer industry there is a thriving market for optional extras, that you can add to your monitor.

For starters, you can get anti-glare screens. These are effectively darkened plastic covers for the front of the monitor that cut down on monitor glare and reflection. If you suffer from this problem these are an ideal solution.

Talking of plastic covers, your latest credit card swallowing investment will prove irresistible to dust. It's probably got something to do with the high voltages inside and static electricity, but either way, my monitor just loves dust. A possible solution is a dust cover for your monitor. These are available for many of the lower priced Amiga monitors and are perfectly designed to fit - alternatively, you could always save money and use a bag from Tesco's.

The final upgrade isn't really for the monitor at all, but will change your Amiga display for the better. A flicker fixer (currently only available for A500/A1500 etc) takes the lower Amiga screen modes that flicker constantly and doubles their scan rates making them more stable. The result is that if you use an Amiga 500 etc for serious work, you can actually now read the Amiga display!! The drawback is that you'll need a VGA type monitor to see the new flicker fixed display. If you're interested checkout ICD's flicker fixer.

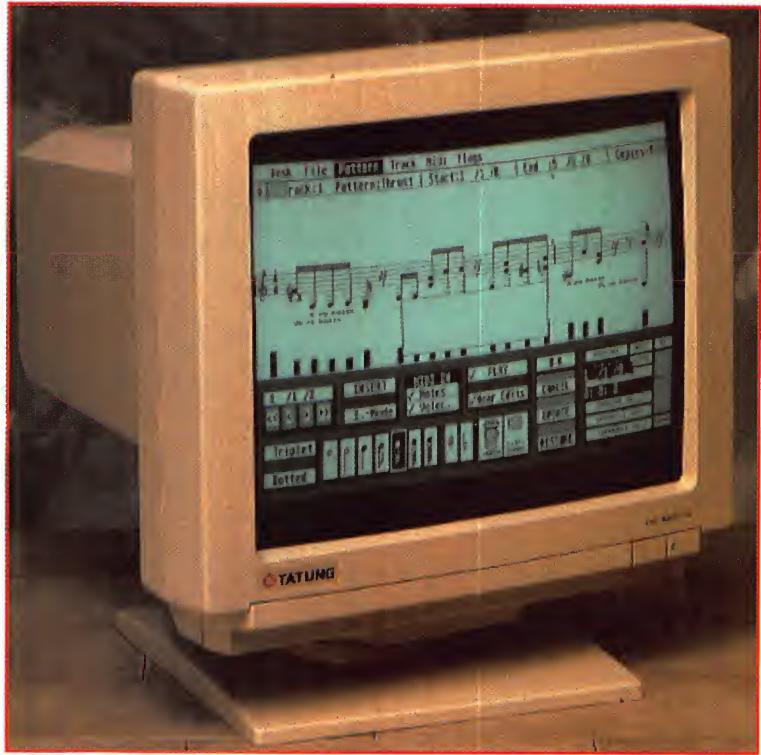
These three upgrades are, of course, just a sample of the wide range of extras you can get for monitors. Most large Amiga dealers and specialists will be only too happy to help you out - here - Silica, INDI, Harwoods etc.

single scan monitor and want to use the new "productivity mode" of the AA chipset, which you can't do with, say the 1084S.

Rather than go out and buy a complete new monitor, you can buy the Tatung for almost half the price of the 1084. This solution will give you two monitors, one for games and one for serious applications for less. The only problem being is that

User port

screen stars continued



One of the few monitors that can display productivity mode.

you've got two monitors and that you're restricted to monochrome work.

Although the monitor itself gave perfectly acceptable results in the tests, we would find having two monitors on a desk too much. And

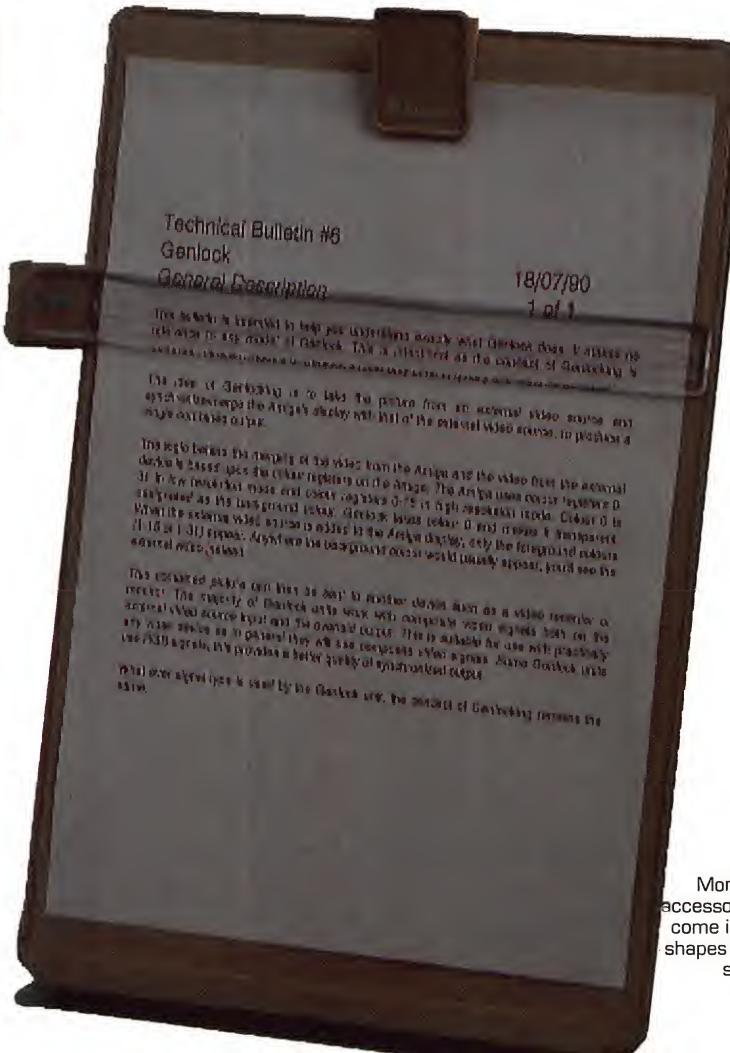
the limitation of it being only black and white is annoying given the Amiga's wonderful colour capabilities. But if you can live with these two drawbacks, the Tatung is a financially attractive solution to working seriously on your Amiga.

Microvitec Cubscan

The charmingly named Cub-Scan 1440 deserves to do well in the Amiga market. It has a very good specification, better than anything else in the review: dot pitch equal to the Commodore 1942, a true multisync supporting a horizontal scan rate of 15KHz to 40KHz, all Amiga resolutions, and tilt and swivel base etc. It is also manufactured by the UK-based Microvitec and claims to conform to a whole string of standards.

Another weapon in the Cub-Scan's armoury is a little feature called Digital Memory Sizing (DMS to its friends). To explain, on other multisync monitors when you change resolution the screen position and size on the monitor also changes. Every time you do this, you have to manually change the monitor's screen to reflect the new resolution. On the Cub-Scan however, it remembers the screen position associated with different sync rates and automatically changes the screen for you - simple but useful!

Two drawbacks are that it doesn't have speakers, which is a bit of a disappointment and it has a price higher than the majority of the other monitors reviewed here. But if you can



Monitor accessories come in all shapes and sizes

problems

You know the advantages of using a monitor, but what about the problems? For many years numerous organisations have repeatedly claimed that using a monitor causes all manner of side effects from stress to physical disabilities such as blindness or cancer. But what are the facts, is using a monitor really as dangerous as some have made out and what can you do about it?

Starting with the obvious, eye strain. Damage to your optical interfaces (your eyes) from prolonged usage is now a recognised problem. There are EEC directives specifying minimum safety requirements when using displays, and in January 1992 a law was passed in the UK, and every company buying and using computers must abide by it, although TVs are not covered under this law. This law says, amongst other things, that employees have a right to an eye test paid for by the employer and that, should they need glasses as a result, glasses should also be paid for. On a personal note, as I write this I am wearing glasses paid for by my employer as a result of a free eye test - and very nice glasses they are!

The regulations cover people using word processors, data input operators and practically everyone using a VDU who spends over four hours a day using one. All elements of the VDU working environment

are covered including type of input device, seating and lighting - although these conditions are left to the employee. Also of interest is that regular breaks away from the computer are taken, so if you'll excuse me, I'll just grab a coffee....

If you use a monitor at work and have not been approached about your eyesight, it's worth asking your employer what they intend to do. Even Amigas when connected to monitors come under this law!!

Silica Systems, the UK's leading Amiga specialist, for instance have already give all their staff, who work with VDU's, free eye tests and several staff have been prescribed free glasses as a result.

If you wish to check where you stand you can call the UK Health and Safety Executive, who enforce the regulations, on 071-243 6000. They produce a pamphlet on the new regulations, it's called 'Display screen equipment work' and has a very reasonable price of £5.

environment

Moving on, the position of a monitor in your working environment can also have considerable impact on the comfort of using your computer and its display. Following these two simple guidelines will save not just your eye sight, but also reduce fatigue, stress and increase your enjoyment.

Firstly, ensure that the screen is not too close or too far away - the display should be clear and any text easy to read.

Secondly, avoid direct reflections - both natural light and indoor lighting should be diluted. If you have a desktop light ensure that it is not aimed at the screen, if you have a window nearby use blinds and don't have the screen facing it.

swedish and godzilla!

Radiation - believe it or not, sitting in front of your monitor will turn you into a green skinned, six legged creature breathing fire, the like of which only Godzilla can tackle! Okay, maybe not, the fears of the 60's have long since passed, but emissions from monitors are something you should be concerned about. The exact implications of exposure to monitor exhaust (?) of any kind, not just radiation, are still unknown. Campaigners from both sides can substantiate their arguments with testimony from various experts so what can you do?

AMIGA

NEW!

AMIGA 1200 PACKS

AMIGA CD³² CONSOLE

FROM SILICA SYSTEMS - THE UK's No1 AMIGA SPECIALISTS

FREE! FROM SILICA

ZOOL SOFTWARE PACK



ZOOL is the software pack of the year. It includes: Zool, Transwite, Pinball Dreams and Striker - Value £127.92.

All Amigas from Silica (excluding CD³², A600 Standalone and Amiga 4000) include a FREE ZOOL pack as well as GFA Basic and Photon Paint II.

ZOOL - Platform Title of the year - 97% Amiga Comp - Nov '92 £25.99
TRANSWRITE - Word Processor and Spell Checker £49.95

PINBALL DREAMS - Pinball Simulation - 94% AUI - Sept '92 £25.99

STRIKER - Soccer Simulation - 94% CU Amiga - June '92 £25.99

ZOOL PACK: £127.92

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PHOTON PAINT II - Powerful Graphics Painting Package ... £89.95

TOTAL VALUE: £267.87



WORTH OVER £265

AMIGA 1200 PACKS + HARD DRIVE OPTIONS

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2 Mb RAM RRP £299
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PACk INCLUDES:

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PACk INCLUDES:

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AMIGA 1200 SPECIFICATIONS

- 68020E Processor - 14.19MHz Clock Speed
- 32-bit Architecture - 2x8 Chip RAM
- Amiga DOS v3.0/Built-in TV Modulator
- AA Chip Set/16.8 Million Colours
- 1 x 32-Bit CPU/HARD Expansion Slot
- PCMCIA Smart Card Slot
- 96 Key Keyboard with Numeric Keypad

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RACE 'n' CHASE **£379** **£449** **£499** **£529** **£599**
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LESS PACK SAVING: £55.28

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EASY ACCESS

Confused by the mumbo jumbo of monitors? Fazed by the advertising waffle? To help you understand the bewildering world of monitors **AUI** presents here a comprehensive definition of monitor jargon.

Composite - The signals to and from your Amiga and monitor can be divided into several distinct types of signal - the video element, sync signals, sound etc. A Composite monitor combines all these various signals into a single lead (a composite of the various component signals).

Dot Pitch - The Dot Pitch is the size of the holes in the shadow mask, the smaller the holes the better the picture quality. For Amiga monitors, typical dot pitches range in size from .28mm to .39mm and above - .28mm is the better. Monitors are available (suitable for use with the Amiga AA modes) that have a dot pitch of .25mm, but these have prices that aren't realistic for the Amiga market.

RF - Acronym for Radio Frequency. Used for TVs, RF is like a composite signal, except that it is transmitted over the air waves rather than being sent by cable.

RGB - Red, Green, Blue. The basic colours that a monitor makes all other colours from. RGB signals contain all three of these colours (separated), so inside an RGB cable you have leads for the red, green and blue colour components.

SCART - A universal cable type for the connection of computers, monitors and other video equipment. Scart leads carry video and sound signals in one cable. This connection is of growing popularity, particularly in the non-computer video market. For those interested SCART is an acronym for Standard Connector for Audio Radio and Television.

Shadow Mask - Behind the screen of a monitor is a shield. This shield has thousands of holes or dots, in a triangular pattern (one each for the red, green and blue colour guns in the monitor). The three colour beams are fired up to the front of the tube, on hitting the shield the three beams filter through their corresponding holes and go on to make up the dots on the front of the screen. The shadow mask is this shield. See Dot Pitch above, for further information.

Well, unfortunately for Amiga owners we don't have much choice anyway! Amiga monitors have very specific requirements to let them to work within the constraints of the Amiga's resolutions, as a result, there are very few manufacturers that do make monitors for the Amiga. Worse the monitors that are available are typically made as cheaply as possible to keep costs down. As a result compliance with EEC guidelines etc isn't, shall we say, high on their features list.

For those interested, the Swedish, being an environmentally sensitive and health conscious lot have laid down specifications to meet the most recent health and safety regulations and standards. In the PC market, where price isn't

everything, monitors are now appearing that comply to this specification - otherwise known by the catchy little name of MPR II. As mentioned early, Amiga monitor manufacturers are not currently that concerned with such things, and as a result none of the monitors tested here complied with MPR II.

Another development that is not on Amiga monitor manufacturers priority list is energy conscious displays. More and more PC systems now employ power management technology. This lets them shut down the various system components when they are not in use. This includes not just the hard drive, but even the CPU.

Increasingly, monitors are following a similar path, using

CONCLUSIONS**overall****best value**

The best all round Amiga monitor available today, taking into consideration price, specification, performance and screen quality has to be the Commodore 1940. With the ability to support nearly all Amiga resolutions, good stereo speakers and a reasonable dot pitch this monitor looked good on paper.

For the best value monitor currently available, the Philips 7CM3209 takes the pick. For a monitor with this specification, the 7CM cleans up in the price stakes. If you can't get this one, go for the 1940 - which, while slightly more expensive is still good value.

serious**games buster**

For playing games, the Philips 8833 is the biz. Great sound, bright colours, good overall score in the tests and a not to high price mean the 8833 holds on to its position as the best games busting monitor.

The Future

With the advent of the AA Chipset and its VGA style resolutions the entire Amiga monitor market has been turned upside down. Expect more and more monitors to start appearing with double, triple or multisync capabilities to support these higher resolutions. Unfortunately this will also edge the price up. Also hovering around are flat screens, low radiation and environmentally friendly

monitors - with low power consumption - you should start to see these soon. Good news for Amiga owners is that sound on the PC is becoming more and more a standard feature. Why is this good news then you ask? Well this will in turn influence VDU manufacturers to produce SVGA models with speakers built-in, which can then be used on the Amiga and support the Amiga's sound.

circuits which turn the monitor off if screen changes do not occur in a certain period of time.

You may think such energy conscious saving are a waste of time, but the US Government believes it can save some \$40million (£25.8million) per year if

all its PCs adopted such systems! As yet, none of the Amiga displays have such capabilities. This is not surprising as even the Amiga doesn't feature this kind of thing. But we suspect that within 12 months you'll begin to see Amiga monitors with this technology. **a**

CONTACTS:**Make/Model****Telephone Number****Commodore 1940**

0628 770088

Commodore 1942

0628 770088

Commodore 1960

0628 770088

Commodore 1084S

0628 770088

Philips 7CM3209

081-689 2166

Philips 8833

081-689 2166

Microvitec Cub-Scan

0274 390011

Tatung Mono

0952 290011

Monitor Dealers**First Computer Centre**

0532 319057

Silica Systems

081-309 1111

INDI

0543 414817

Gordon Harwoods

0773 836781

Model	price	built-in speakers	dot pitch	screen size
Philips 8833	£293	yes	42mm	14"
Commodore 1084S	£199	yes	42mm	14"
Commodore 1940	£299	yes	39mm	14"
Commodore 1942	£399	yes	28mm	14"
Commodore 1960	*	no	38mm	14"
MicroVitec CubScan	£449	no	28mm	14"
Philips 7CM3209	*	no	31mm	14"
Tatung Mono	£149	no	-	14"

* Price available on request from dealers.



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GVP offer a range of A1500/A2000 accelerators that simply outstrip the competition for speed and specifications. Their G-Force range includes the fastest Amiga accelerator available (the 68040 33MHz version) whilst offering a range of functions, such as 32-bit RAM upgrades, SCSI interfaces and maths co-processors. For boosting the power of your Amiga you can't beat the GVP G-Force range!



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ONLY WHEN PURCHASED WITH G-FORCE ACCELERATORS SHOWN BELOW

G-FORCE ACCELERATORS	030 25MHz	030 40MHz	040 33MHz
Speed MIPS*	7.48	12.1	30
Processor	68030EC	68030EC	68040
Maths Co-Pro.	68882 included	68882 included	In 68040 processor
Std 32-bit RAM	1Mb	4Mb	4Mb
Max 32-bit RAM	13Mb	16Mb	64Mb
Extras	SCSI	SCSI	SCSI Ser/Par
PRICE	£349 INC VAT UPG 0110	£699 INC VAT UPG 0430	£1299 INC VAT UPG 0740

*MIPS: Millions of instructions / second, a normal Amiga runs at 87 MIPS

GRAPHICS CARD FOR A1500/A2000/A3000/A4000



ALL-IN-ONE GRAPHICS CARD
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A1500/A2000 ADAPTOR - £49.95 - GVA 5224

IV24 inc VIU-S	IV24 inc VIU-CT
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G-LOCK
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Capture sound from an external source and play it back in stereo or mono on your Amiga. The latest version of GVP's Digital Sound Studio (DSS8+) enables you to create audio effects for use in games or jingles.

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- Simultaneous Composite & S-Video and RGB Output
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- AFlexx Compatible
- Works with Flicker Fixers
- Multiple Keyer Modes
- Full Audio Support

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NEW!

Adding RAM or a hard drive to your Amiga will have a considerable impact on its speed. The GVP SCSI/RAM allows you to enhance your Amiga with both. Its SCSI hard drive interface is one of the fastest available, whilst its 32-bit RAM upgrade is based on the same technology as that featured in the best selling A1230.

- Built-in, Full SCSI Hard Drive Interface
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0Mb RAM
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NEW!
£199
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286-16 MHz
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PLUGS INTO THE HD8+ OR A530 TO ALLOW YOU TO RUN PC COMPATIBLE SOFTWARE ON YOUR AMIGA

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test drive



You have 20 seconds to comply! Drawn artwork in 256,000 colours is superb.



Colorburst and Alfadata, a double whammy?

The Sight Hand Sc

David Taylor and Patrick Howlett test drive two hand scanners. Which one makes your head explode?

colorburst

We were amazed at the speed with which this scanner could be set up and put into use. For once the procedure was simple and clearly covered in the manual. Many people who come to this sort of technology for the first time find the manuals so complicated that they soon give up on their new hardware, but Colorburst has an easy-to-follow manual which takes the user through the necessary steps.

Once familiarised with the hardware and software, it is a matter of minutes before you can get very high quality scans which we'd previously believed impossible from a hand scanner. Admittedly, this all comes at a price. Running on an A1200, the AGA chipset allowed wonderful results, but would have been impossible without the enormous amount of extra RAM bolted on and the hard drive was just as essential.

Another requirement for the best results is a very steady hand and the picture must have a large enough border to ensure that the scanner doesn't get caught on the edges. One of the most difficult parts about using the scanner is ensuring the lamp has had enough time to warm up and that you then judge the brightness control well. Otherwise the image appears distorted or at least too light or too dark.

The benefits of this scanner only really become obvious when the results are incorporated into other programs. By itself, the

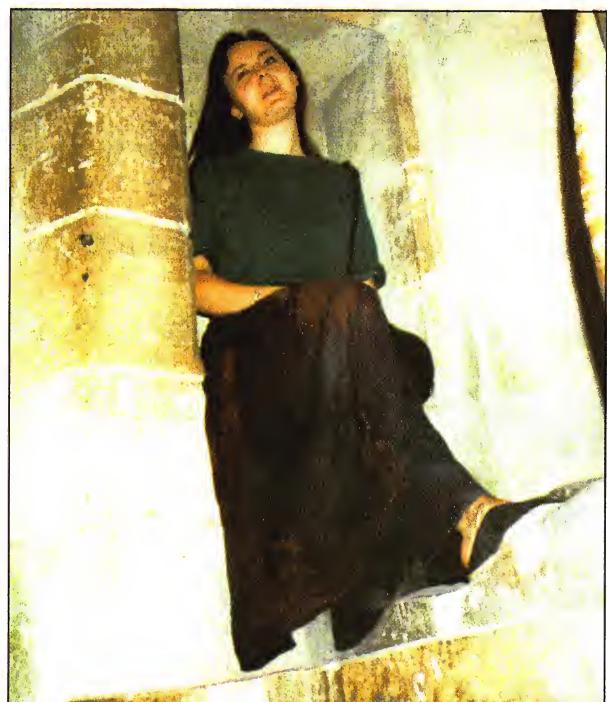
Colorburst creates some very fine colour scans. Visually impressive, but of little use until you import them into another package (We used MorphPlus and DPaint IV AGA). There you can touch up any imperfections and, with a little imagination, create some very unusual pictures in no time at all - as can be seen from the picture on this page.

For amateur and semi-professional users, the Colorburst provides a good addition, helping to generate lavish colour documents at a respectable price. You do need to have a quite powerful Amiga to run it with and other applications to process the results, but it is worth considering if you are interested in starting a DTP publication.

OCR

Included in the package we reviewed was an extra piece of software called Migraph OCR (Optical Character Recognition). It is intended to allow scanning of typed text which the software will then convert the IFF scan into ASCII format. This is no mean feat and one which has been striven after for many years.

With the enormity of the task, OCR bore up well. It was far from perfect however. The text to be scanned needed to be of very high quality and your hand of the extremely steady variety. We also had to expand the buffer in the program from the small amount originally allocated to a significantly higher



Scanning people is not as successful...

of One Scanning

number - again a question of the amount of RAM you have to spare.

If all this is the case then OCR managed reasonably, we could hardly claim a 100% success rate and still had to 'teach' it certain letters that it couldn't recognize, either because they were too close together or because the quality of that portion of the scan was not high enough.

Perhaps it would improve with practice, but perhaps it would just be quicker to type it in, especially since an A4 piece of text requires you to scan the page in three portions.

A few other things need mentioning. Firstly, the scanner must be plugged directly into the parallel interface, which means a bit of messing around when you have to continually swap between this and a printer. Additionally, the software was not 100% reliable running on the A1200 and did crash occasionally - an annoyance if you have spent time creating a scan.

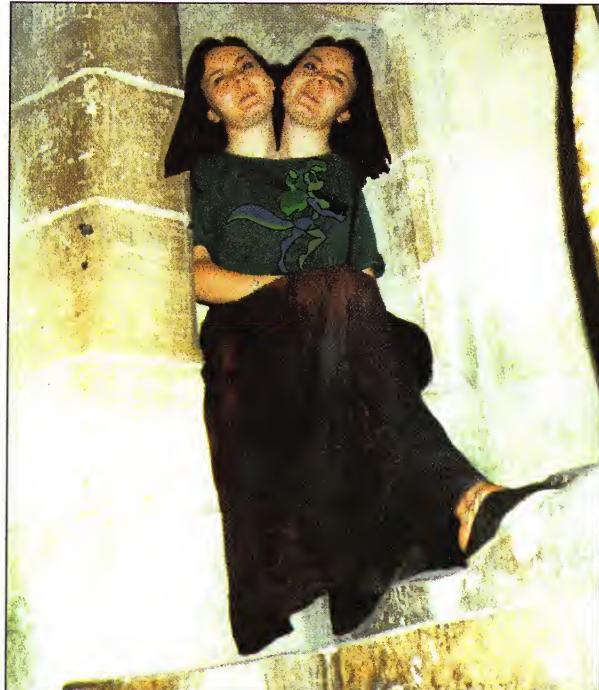
alfadata

The second scanner on test is from AlfaData, although the scanner unit itself appears identical to the Migraph unit. There are several differences between the two packages which may (or may not) account for the price differential.

For a start, power for the scanner head comes from the external floppy drive port, an unusual approach which seems to work fine in practice. This is achieved through the use of an adapter plug which sits between the floppy drive connector and disk drive port of the computer. A lead runs from the adapter plug to the rather large scanner interface which itself is plugged into the computers parallel port. The setup is finished with the scanner head which is connected to the interface box.

Software

The other main difference between this and the MiGraph package is the software. Migraphs offering is professional and easy to use (even with the bugs!), the AlfaData software however, lacks that up-to-date feel that we have come to expect these days. This could almost be forgiven if it was powerful, but it lacks many of the facilities offered by the Migraph software. For instance, it lacks an option to select the number of colours to be used in supercolour mode. It only uses HAM8, whereas the Migraph package allows the user to select the number of



... but can be used with other programs to create images that really turn heads!

It sounds more complicated than it is, the only problem being that the scanner interface remains on until you disconnect the power adapter, which is a real hassle. The scanner interface has a switchable through port for the printer, which is handy, and flashing LEDs to indicate whether the printer or scanner is selected, which becomes annoying after a while.

Migraph Colorburst Scanner vs AlfaData AlfaColor Scanner

settings

The Colorburst has more settings than a microwave and allows you to scan from between 50 and 400 dpi. In the Super Color mode (which allows a scan of 256,000 colours), the highest dpi possible is 200. 400 dpi is only available for Greyscale or Dithered Color. The software allows you display the image in anything from 2 to the 256,000 from the 16.7 million available with the AGA chipset.

The best results come from original photographs or line drawings, but most sources provide an acceptable scan. Even if the scan is a little below par, it can be improved by hand in a paint package - provided you have the memory required.

combination of both but whatever it is, the images produced lack the quality and sharpness of those produced by the Migraph.

To give the AlfaData package a chance, we tried using the Migraph scanner software with it. Unfortunately it failed to communicate properly with the interface and scanner itself, so it seems stuck with its own software.

This is a real shame, because we believe that with better software it could equal the performance of the Migraph. However, if the specification and performance matched that of the Migraph, the price probably would as well.

As it stands the price differential is not enough to warrant purchasing the AlfaData instead of the Migraph. The extra money needed for the Migraph is money well spent. Those

opting to save the cash would probably find the results ultimately disappointing, whilst users of the Migraph will find that they have the facility to produce scanned images of very good quality.

With the OCR software thrown in for good measure, the Migraph package is highly recommended. The AlfaData seems to be all at sea, needing decent software if it is to compete with the best. Of course, if it were cheaper...

INFO

Migraph Colourburst

Price: £399.00

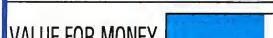
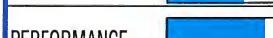
AlfaData AlfaColor hand scanner

Price: £299.00

Contact: Golden Image (UK) LTD
Unit 12A, Millmead Business Centre
Millmead Road,
London N17 9QU
Tel: 081 365 8356

Colorburst

Ratings: Out of 10



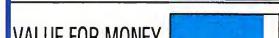
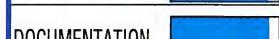
OVERALL RATING



70%

AlfaColor

Ratings: Out of 10



OVERALL RATING



85%

test drive

Barry McCarthy has had a revelation ... test driving a package that he doesn't know how he lived without.

Ever heard of them? No. They just arrived one day, in the post. To be honest, I've only just got round to looking at them, about a month later. Boy, do I wish I'd got around to PowerFonts sooner?

I'll give you my conclusion immediately. After just one quick go, without the manual, I can't see how I could do without PowerFonts.

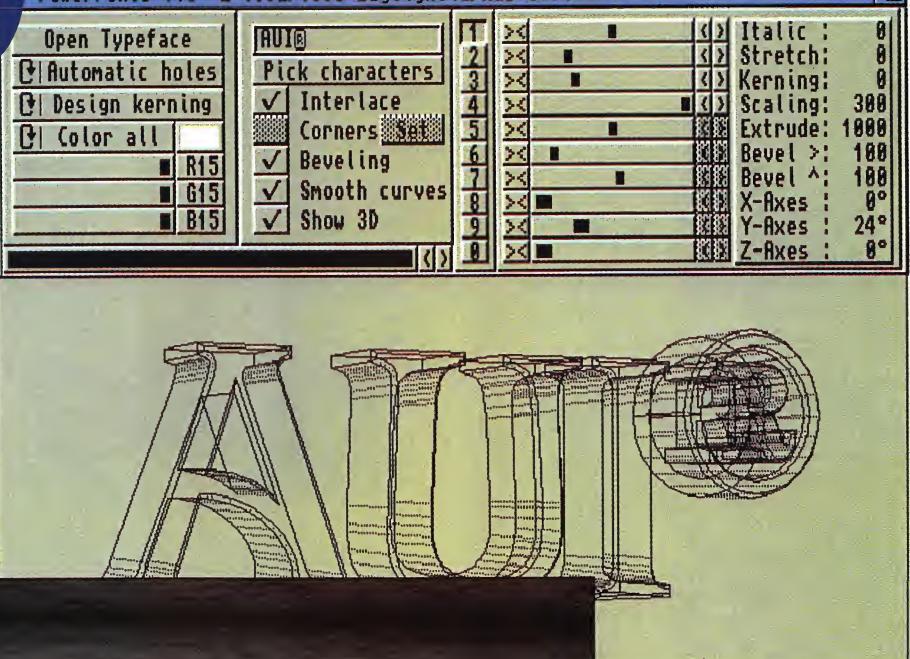
I know, it seems unlikely but it's true. Rarely do I

come across a piece of software that leaves such a warm feeling.

What are they? Well that's what I thought, before I used them. Just a collection of 3D fonts/objects. Big deal. Well I was wrong. Kind of. PowerFonts is (not are) a program that will convert any scalable Agfa® Compugraphic® font into a 3D object. Yes but this has been done before. Pixel 3D professional can do it. Actually it can't, it will only

PowerFonts

PowerFonts 1.0 © 1992/1993 Lugtighed/RGB Software.



A 3D typeface using beveling.



Try doing this without Powerfonts.

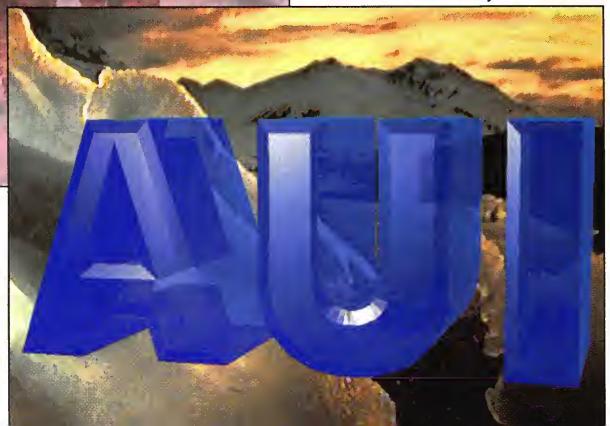
convert standard Amiga fonts. Very chunky and utterly unusable for 3D logos. OK, so type your words in Pagestream or

ProPage and grab the screen. Now load and convert in Pixel 3D. For anyone who has done this as often as I have, you'll

know how incredibly difficult it is to get it right. Loads of points making up straight lines! Far too many points defining curves, so use

smoothing and suddenly, it's made of lumpy Plasticine. Bu**er, start again and again and again... The manual is annoyingly cryptic and unhelpful and the results of your actions are only evident after you've committed yourself. Yes I know it's got UNDO but it's hardly what I'd call interactive. It's called trial and error (for good reason). And it's not what I look for in professional software these

Another example of Powerfonts flexibility.





Another fantastic picture created with the invaluable help of Powerfonts.

days. The Amiga has been around long enough for people to know what is required. How about reading reviews and listening to your public?

load up

For a start, leave the manual alone, you probably won't need it. You begin with a requester that lists all your installed scalable fonts. If you wish, you can use the requester to move devices around and obtain your fonts from anywhere. Click on the font of your choice and in seconds, it's converted to an outline of your new 3D object. It's fast and it's extremely accurate. The top half of the screen holds most of the controls, with more general functions assigned to the pull down menus. The bottom half of the screen shows your new outline.

There is a box to input your letters (up to 30) and buttons for Pick characters, Interlace, Corners, Bevelling, Smooth curves and Show 3D.

Most of them are self explanatory and work instantly and perfectly.

Pick characters gives you a key map with which to pick the more obscure characters and is genuinely useful.

Corners lets you adjust which points are to be

assigned as sharp corners, by angle. This is only really useful for Real 3D object output.

Bevelling gives only a standard bevel which is adjustable in scale.

Smooth curves will increase detail at the obvious expense of rendering time.

Show 3D produces a 3D display of the letters instead of just an outline.

the rest

Controls on the left for colour, kerning and hole adjustment. Kerning works wonderfully (incase kerning is alien to you, it means adjusting the spacing between certain letters, such as capital A and e, so that they fit together in a more natural way) and the hole adjustment is useful if your original font is not converted quite right. This is a problem with some outline fonts, not PowerFonts. Cured with a click.

On the right is a bank of sliders that make all the detailed alterations as follows; Italic, Stretch, Kerning, Scaling, Extrude, Bevel >, Bevel ^, X-Axis, Y-Axis, Z-Axis.

All the sliders have a default button and one step at a time buttons. Finally on the icons, is a slider that allows you to scroll across



Enhancing text is simplicity itself

provide a solid or rendered display option. That's it.

conclusion

If you are into 3D and you ever need good quality text objects then go and buy PowerFonts NOW. There is simply nothing better on the market. **a**

INFO

Price: £85.00

Contact: Activa

P.O. Box 23260

1100 DT,
Amsterdam, Holland.

Tel: Activa

010 31 206911914



AUI receives the Powerfonts treatment and goes up in flames.

the display. You'll need this if your letters go off the screen. Menus are provided for all the usuals such as loading and saving, saving preferences and altering the colourscheme.

There are a choice of 10 buffers in which you can store your 10 most oft used configurations. Marvellous.

You can also eliminate the detail from the back of objects, if they are only ever seen from the front. This can make a big difference with rendering times.

Finally, you have the output format. Currently

this is limited to Real 3D and Videoscape for version 1.0. The formats almost ready for the next upgrade are; Reflections 2, Imagine, Sculpt, DXF AutoCAD, Caligari, LightWave and 3D Professional.

manual

Forget it, you won't need it. This is just how I like it. What else?

There are a few tiny moans. Please provide the ability to have different shaped bevels. Please

Ratings: Out of 10

FEATURES	<div style="width: 100%;">0 2 4 6 8 10</div>
EASE OF USE	<div style="width: 100%;">0 2 4 6 8 10</div>
SPEED	<div style="width: 100%;">0 2 4 6 8 10</div>
PERFORMANCE	<div style="width: 100%;">0 2 4 6 8 10</div>
DOCUMENTATION	<div style="width: 100%;">0 2 4 6 8 10</div>
VALUE FOR MONEY	<div style="width: 100%;">0 2 4 6 8 10</div>
OVERALL RATING	<div style="width: 100%;"><p>0 25% 50% 75% 100</p><p>96%</p></div>

test drive

Macro68 is a fully featured, customisable, macro assembler for the entire 680x0 family of processors and associated co-processors. It does, of course, come with a set of Amiga include files and amongst its other features also provides direct support for Copper programming. It comes as a plastic cased three disk package along with an A5 size manual and it is obvious that an awful lot of work has gone into Macro68.

Like alternative offerings, Macro68 has plenty of the bells and whistles expected of a modern day assembler. There is, for example, a comprehensive range of pseudo-ops (commands used to control the functions of the assembler itself). There are plenty of novel features too, such as the inclusion of ARexx support. Macro68 also supports the new style Motorola syntax.

Macro68's documentation, 128 A5 pages, is certainly comprehensive but it clearly lacks the soft, tutorial, style sections that make life easier for the newcomer. In practice the assembler works fine and it is, as the package cover details suggest, quite powerful.

directives

All the usual types of directives are supported including fairly modern additions such as INCBIN for the inclusion of binary files (used to incorporate things like graphics data). There's also a equal range of less usual directives...

CSYMFMT, for example, causes defined external references and externally visible entry points to get an initial underscore tagged onto them (which saves you doing it yourself when creating assembler-based C code patches).

Macro68 is also

extremely fast

although I'm not

sure who cares

about such things

nowadays.

Macro68 is also extremely fast although I'm not sure who cares about such things nowadays when so much code preparation is done either directly in ram or via hard disk (where assembly times can, in the main, be kept short anyway).

It's pretty obvious

that anyone who

brings out an

assembler package

for the Amiga has

an uphill struggle.

I'll be honest, I have persevered with, but have not particularly liked Macro68. More to the point I don't feel that it will

MACRO 68

**Paul Overaa checks out
a package aimed at
low-level Amiga coders...**

conclusion

accepted by the Amiga 68k coding community at large! It's pretty obvious that anyone who brings out an assembler package for the Amiga has an uphill struggle. Why? Because at the lower (cheaper) end of the market lies Charlie Gibb's freely distributable A68k macro assembler... which is a good, well tested, and perfectly adequate piece of software (although you do admittedly have to fork out for the official Commodore include files in order to produce a workable Amiga development system (Commodore charge £25 for these)). At the other extreme comes HiSoft's Devpac 3 which is without doubt a superb package with good documentation, a proven track record, and a very contented user base.

INFO

Price £130 (including VAT)

Contact:

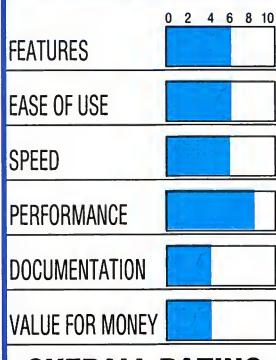
Helios Software
163 Huthwaite Road
Sutton-in-Ashfield
Nottinghamshire
NG17 2HB

Tel: 0623-554828

A68k offering. Macro68 does admittedly have some novel and useful facilities but they are not enough to warrant a retail price of £130.

Sorry, Digisoft, but I just do not believe that Macro68 is going to find a niche in the Amiga marketplace in its current form! **a**

Ratings: Out of 10



OVERALL RATING

0 25% 50% 75% 100

56%



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AlfaRAM 1200

Patrick Howlett tests out a versatile add-on in the widening world of the 1200.

The AlfaRAM 1200 is the latest entry into the growing range of A1200 trapdoor expansion cards. There are several cards which attempt to transform your 1200 into a monster machine. The top end boards offering processor upgrades along with the usual memory and FPU options.

The AlfaRAM 1200 is a mid-specification card which is slightly unusual for several reasons. First, it's expandable to 9Mb of fast RAM, which to my knowledge is 1 Mb better than any of its competitors. Second, it utilises the more economical ZIP RAM chips and third, it requires an oscillator to synchronise the FPU (if fitted).

The oscillator is needed since this board lacks a CPU and therefore can't utilise the processor's clock. Options for the FPU are 25, 33 and 50MHz, with each requiring an oscillator of the same frequency.

The review board was well-equipped with the full

9Mb RAM, a 33MHz 68882 FPU and a 33MHz quartz oscillator. The instruction booklet is full of warnings about the incorrect use of the FPU and memory. In particular, there is a potential problem when using the top 4mb of expansion RAM in conjunction with the PCMCIA slot. Apparently, unless that 4Mb of expansion memory is disabled, serious damage can occur. Be warned!

There is a set of DIP switches which control the enabling of RAM and the FPU but thankfully, Golden Image had supplied this board ready for immediate use, with all 9Mb enabled.

tight fit

Good job too, because the instruction booklet is not too easy to understand. There are the various warnings already mentioned to deal with, all made worse by the English which has been clumsily translated from German. A minor point I

know, but the instructions might be vital to someone (I actually found them quite funny!).

Fitting the card looks like being a simple procedure but as with all 1200 trapdoor expansions, it's a really tight fit. 15 minutes of pressure and wiggling was needed to get the board properly onto the connector, and even then brute force was the only answer (don't worry, we didn't break it!).

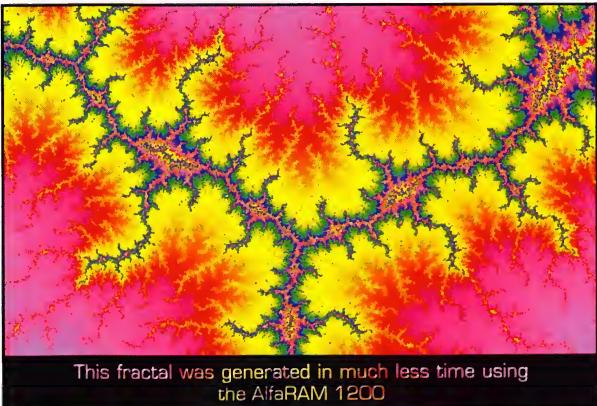
However, once installed all this is easily forgotten, booting the machine immediately shows the huge amount of RAM available. You sit back and bask in the glory, knowing that there is a tasty 68882 FPU ready for action as well.

Gloating aside, the advantages of a significant memory upgrade are obvious. Whether it's graphics, DTP, animation, sound or whatever, you can do more, much more in fact.

The standard A1200 struggles to handle large HAM8 images and animations, but with 11Mb there seems to be no limit as to what you can do. There are of course, but the limits have been vastly stretched.

To help reach these limits, the 68882 can be used to do some serious calculations.

Ray tracing is an obvious application, with Real 3D2, Imagine and the others providing direct support for machines equipped with an FPU.



This fractal was generated in much less time using the AlfaRAM 1200



The AlfaRAM fits in the A1200 trapdoor expansion, just!

time over

To evaluate the increased performance offered by the AlfaRAM I opted to use HiQ's Fractality, since floating point operations are used in abundance for fractals, and also because it's a quick and easy way to get results. Besides, I'm frightened of Real 3D2!

A complex fractal was selected, to be rendered in hires lace, in 256 colours. The standard A1200 had barely enough memory to draw this image, and took 2 hours 45 minutes. With the AlfaRAM 1200 fitted, the image was completed in 1 hour and 34 minutes, and there was enough memory and time left to create an animation with the image.

The difference that this card makes is obviously substantial, but there are many other benefits that come from expanding the 1200. Hard disk transfer times are improved, as is the general speed of the

machine when running programs (not by much though).

Multitasking also takes on a new meaning since you can have four or five large applications running at once. There is also a battery backed clock on the card which is very useful.

conclusion

This card performed flawlessly and really allowed the 1200 to utilise fully the power of the AGA chipset. The completely equipped board is well priced considering what it offers, since it turns the A1200 into a very, very capable machine.

If you're in the market for extra memory and perhaps an FPU, but don't really need an upgraded processor, then the AlfaRAM 1200 will fulfil your every wish - well, almost -, and it may well work out to be a lot cheaper than any of the competition with a similar specification. **a**

INFO

Price £499.00

Contact:

Golden Image (UK) Ltd

Unit 12A

Millmead Business Centre

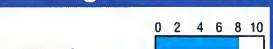
Millmead Road

London

N17 9QU

Tel: 081 365 1102

Ratings: Out of 10



OVERALL RATING



88%

test drive

MICRONAVIGATOR

Dave (A Wing and a Prayer)
Thorpe takes off in a real flight simulator for real pilots.

There are plenty of flight simulators available. Your Amiga will let you pilot Apache helicopters over the desert, take a Harrier into battle, or fly a Stealth Bomber only you know where. So what makes this flight simulator original? Micronavigator isn't a game - it is aimed at those who can already perform real takeoffs and landings and don't feel the need to waste whole armies in between.

The package consists of two sections, a flight planner and a radio navigation simulator. The program can provide flying clubs and individuals with a means of checking flight plans and aiding pilots as they learn the intricacies of instrument flying and navigation.

Micronavigator is the only program of this type for the Amiga. Similar PC software ranges from simple £40 flight planners (such as the one included with Micronavigator) through to simulators with full graphics and sound which cost up to £250. Micronavigator combines both these facilities in a much more economical package.

planning

The program operates from a database of nearly 1000 airfields and beacons covering the whole of the UK, Ireland and part of Northern Europe. A flight can be planned anywhere within this area via a map of

these and user defined locations. The route can be quickly entered by using a combination of mouse clicks and key presses. This takes some getting used to as the on screen prompts aren't too helpful. The manual explains the procedure well, but makes a poor reference book; the inclusion of an index or control summary



Even better, the real thing!

card would have helped steepen the learning curve.

Once you have laid out the route, the magnetic track, distance and flight time for each leg are calculated, based on the aircraft cruising speed and the wind conditions. The type of aircraft you fly is determined by the cruising speed you set. This can range from 50 to 160 knots and the aircraft performance is scaled to match the chosen speed. Once saved, the flight plan can be printed, re-edited later or used as the route for an exercise within the navigation simulator.

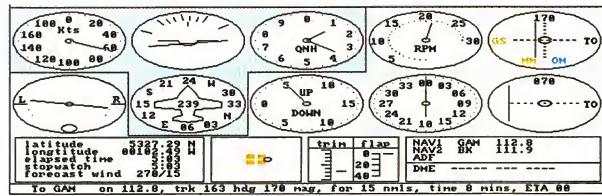
practice ILS approaches and other exercises.

In addition to all the usual controls and instruments, there are four on board navigational aids and a map screen showing a plot of your track and height. The map is identical to that in the flight planning section and can be used to judge performance. The flight map has the additional feature that it may be rotated to be aligned on, for example, a runway heading for a more natural view of the approach. The tuneable navigation aids are all very easy to set and none of the standard features is missing.

The Micronavigator aircraft also comes equipped with a stopwatch for timing legs and a limited panel option to blank out some instruments. Flying the route is easy if it's a calm day, but weather conditions can make holding your course a little tricky. The wind can be set to a particular speed and

flying

The navigation section of the package is rather basic when compared to other flight simulators. There are no "out of the cockpit" graphics and very limited sound. When used in conjunction with the flight planner, however, it is possible to pilot the light aircraft around any previously prepared route. Alternatively, after setting the initial starting point, you can fly a route without a track to follow or



The conventional display, black on white

direction and a degree of randomness and even turbulence can be introduced for realism. The program stores the last two hours of flight information, providing the one of the simulator's most useful features. When the track is displayed on the map it is possible to return to any point and re-fly part of the exercise. The program features are all very good and the only thing that's missing is an autopilot feature. This would remove the frustration of not being able to fly the A500 as well as you can a Cessna.

conclusion

Micronavigator is somewhat let down by look and feel of the interface and the lack of support given to the user through the documentation. Only one worked example has been included for the flight planner and no help at all is given for the radio navigation section. It would have been helpful if a few standard exercises were already on disk, along with the perfect result. You could then see if your performance came up to scratch - after all the intention of the simulator is to train. The interface suffers from not being of the Workbench style, which means nothing is where you

updates

The company updates the software whenever a program bug is reported. I reviewed version 4.15 and this only differs from recent releases by the bugs which have been removed. I could only get the program to auto-boot with Kickstart 1.3, "MN" having to be typed at the command line for it to work with Kickstart 2 or 3. This problem is being investigated at this very moment and I expect the corrected version will be available soon. People with recent versions of Micronavigator can get updated, bug free versions at no extra cost and R.C. Simulations will take older copies in part exchange. **a**

Ratings: Out of 10

FEATURES	8
EASE OF USE	7
PERFORMANCE	8
DOCUMENTATION	6
VALUE FOR MONEY	7
OVERALL RATING	85%

INFO

Price £99.00

Contact: R.C. Simulations
Unit 1B
Beehive Trading Est
Crews Hole Road
St. George
Bristol BS5 8AY
Tel.: 0272 550900



The flight plan map with ILS beacons and Airfields displayed.

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- ADPro placed third among ALL Amiga® software products on the MicroPace 1992 Top 50 Sellers List.

- The Post Group, one of the largest post production houses in the world, has used ADPro and MorphPlus in the production of special effects for the prime time TV



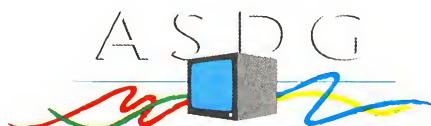
show Quantum Leap and for major motion pictures.

- Mark Swain, an AmigaWorld reviewer (and animator for Foundation Imaging, the creators of the special effects for Babylon 5), said, "MorphPlus produces the most realistic shape shifting special effects I have ever seen on a desktop."

- David Duberman, Executive Editor of Video Toaster User, said in a comparative review of Amiga®

morphing products, "MorphPlus is the Rolls Royce of Amiga® morphing software... it will pay for itself with one job."

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test drive

Powerful software packages, like AdPro and MorphPlus need a knowledge of ARexx to work at full steam. God, or Doug Crane, has finally answered our prayers, as Gary Fenton joyfully discovers.

Cast your mind back to reviews of Art Department and MorphPlus in past issues of *AUI*. Now, didn't I say that you can't use these packages to their full potential unless you can efficiently program scripts in Arexx? Did I not also complain bitterly about not having a graphical interface to create powerful animation using MorphPlus?

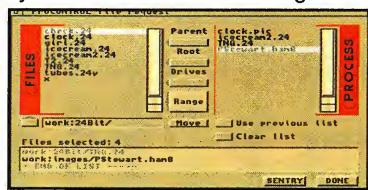
Well, manna has fallen from the heavens and praised be the name of Doug Crane. Doug has created a wonderful program with a graphical front end which interfaces with either ADPro or MorphPlus. Throw away your ARexx manual and let's find out what ProCONTROL can do for you.

ProCONTROL visually displays all of ADPro's controls on its own screen. To get ProCONTROL working you have to create a script. No, I'm not talking about ARexx or anything like that! All you have to do is click on a series of buttons and ProCONTROL writes a script for you. There's really nothing to it.

The best way to demonstrate this is with an example. Suppose I wanted to batch process 10 images, scale them down to 320x256 pixels and render them as low-res HAM8 images before saving them as an IFF animation. Easy peasy...

file list

Using ProCONTROL, double click on the name of the loader you want to use. A file requester appears and the idea is to select one, or all, of the files you want to put through this



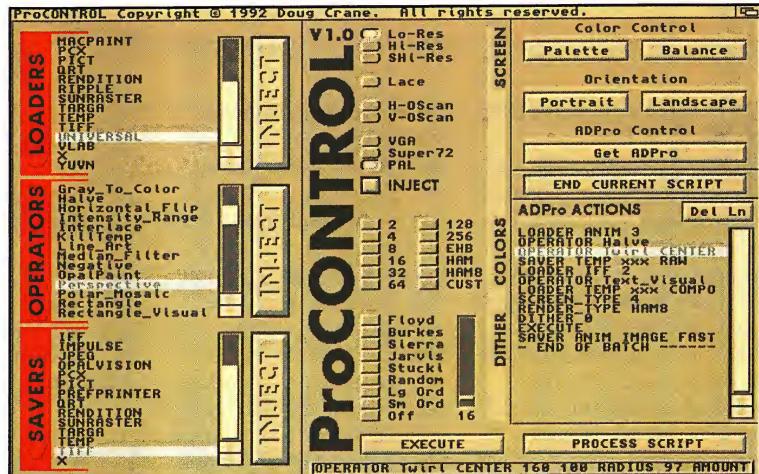
"Its versatile file requester."

ADPro faithfully executes every command ProCONTROL gives it. A process indicator bar lets you keep track of how much has been done so far.

support

ProCONTROL supports all of the loaders, savers and operators in ADPro and MorphPlus. Custom control windows let you composite images exactly and even animate them across the screen! Entering

PROcontrol



"ProCONTROL's most excellent interface."



"Movement and 3D effects are now much easier to do."

to specify other changing numbers to create animations using ripples, perspective, and all the other Operators too.

Please note that you must have the latest version of either ADPro (v2.3) or MorphPlus (v1.3) to use ProCONTROL.

conclusion

ProCONTROL has changed the way I use ADPro. I don't have to fight with ARexx anymore and my imagination has been freed to run riot with previously challenged ideas. The only problem I found was a lack of script editing controls and it sometimes got lost when I hacked around with a script too often. Other than that, I utterly recommend ProCONTROL, buy it now! a

INFO

Price: £69.95

Contact: Meridian Software
East House, East Road Ind Est
East Road, London, SW19 1AH

Tel: 081 543 3500

Ratings: Out of 10

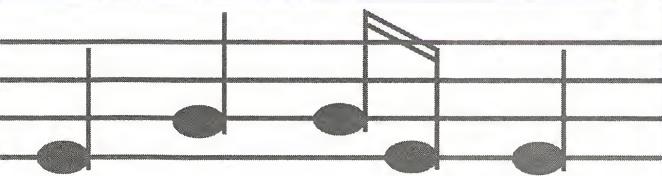
FEATURES	<div style="width: 100%;"><div style="width: 100%;"> </div></div>
EASE OF USE	<div style="width: 100%;"><div style="width: 100%;"> </div></div>
PERFORMANCE	<div style="width: 100%;"><div style="width: 100%;"> </div></div>
DOCUMENTATION	<div style="width: 100%;"><div style="width: 100%;"> </div></div>
VALUE FOR MONEY	<div style="width: 100%;"><div style="width: 100%;"> </div></div>

OVERALL RATING



numbers like "10 f 220" would move the image from the coordinate 10, finishing at 220. This is a great way

test drive



Blue Ribbon's Bars & Pipes Professional, which has gained more than a few friends over the last few years, has turned out to be as much a creative tool as a conventional sequencer. Because it encourages you to experiment with your music it is therefore, as sequencers go, very different from other Amiga sequencer offerings. Bars & Pipes Pro version 2 has just arrived and, in case you've not seen earlier versions of the package, a few words about B&P sequencing arrangements are in order.

The centre of the main display contains a track list. Each track sits graphically in the middle of a 'PipeLine' which starts at the left hand side of the screen and finishes on the right. When the program first loads each track has MIDI connector icons situated at each end of each track's pipeline and these represent the fact that MIDI input and output facilities are available. There's no limit to the number of tracks which you can create (other than the amount of memory available) and conceptually your MIDI data flows in at the left hand side of the

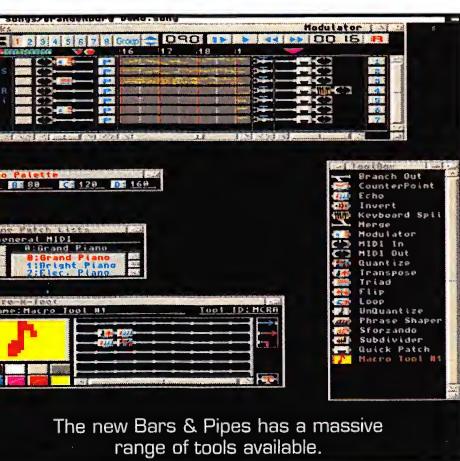
works in conjunction with the ToolBox. To the user the ToolBox is a window which contains icons that can be dragged into and out of the pipeline. Tools on the left hand side, the input side of a track's pipeline, change the MIDI data before it enters the sequencer. If, for instance, you drag the harmony icon to the left hand side of track 2's pipeline then your track 2 MIDI data will be harmonized before being stored in the sequencer. If you had placed a quantizing module on the left hand side of a track you could also have pre-quantized the data being stored.

ToolBox icons placed on the right hand side affect the sequencer output after it has left the sequencer. They affect the MIDI output stream but not the stored sequence data. If, for example, you had recorded a track using the quantize tool on the right-hand-side, and then decided that you didn't like the final result, you could, by subsequently removing that tool, reinstate the original 'unquantized' track contents.

How many tools can you place in the pipeline?

The short answer is as many as you want! When a toolbox icon is dragged into the pipeline what actually happens is that the track gets its own copy of the tool in question. If, like the echo facilities, the tool can be edited then clicking on the

icon provides an edit box which lets you change that track's version of the tool. The end result is that each and every track can have its

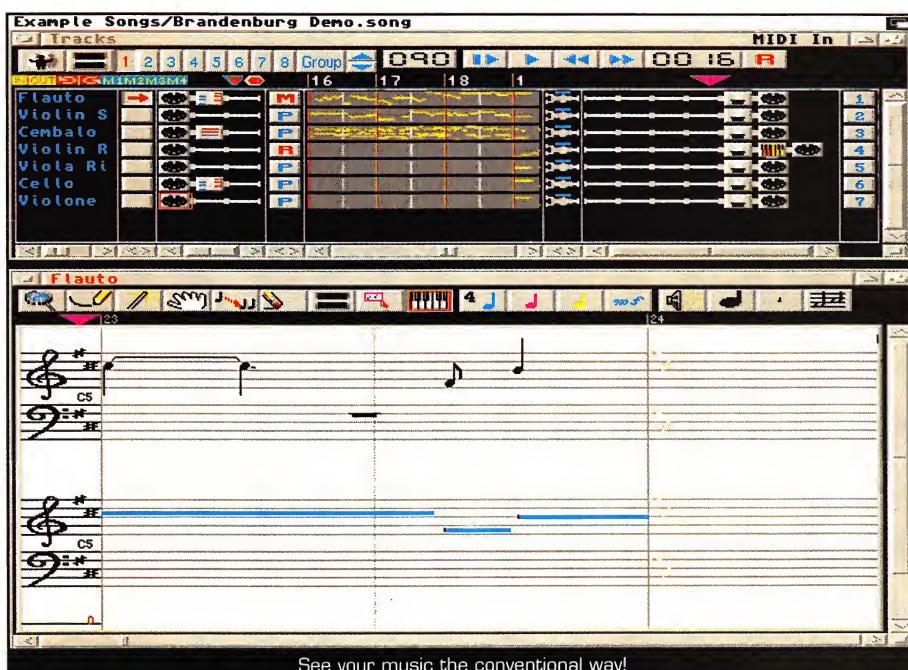


The new Bars & Pipes has a massive range of tools available.

pipeline, through the sequencer, and then leaves via the right-hand-side output side.

The pipeline concept

BARS & PIPES PROFESSIONAL 2



See your music the conventional way!

Paul Overaa rigs up the latest version of the renowned package to his MIDI gear to find out how it plays.

own version of any Toolbox module.

open ended

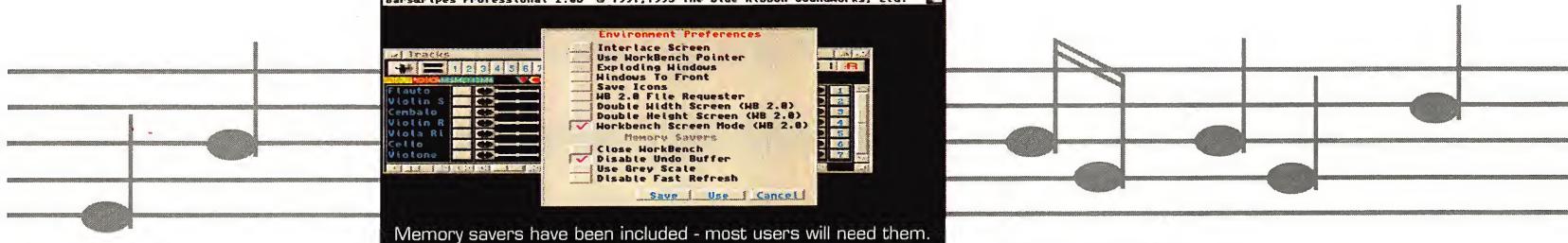
Much of Bars & Pipes Pro 2's additional power comes from the now massive range of tools available - 79 of them in all. As well as the nowadays familiar sound effects (like echo and modulation), event re-

direction and filter tools, and enhanced quantizing, there are a range of specialist multi-media options. Bars & Pipes now has extremely powerful multi-media connections which provide support for IFF still and anims display, links to Scala, IV24, the Sunrise digitizers and so on.

From the MultiMedia Madness window, which is similar to a conventional

Bars & Pipes track edit window, you can tie presentation events to notes (or whole groups of notes) and process them in user selected ways (eg to produce IFF picture fades and so on).

While we're talking about the more high-power facilities the new B&P does of course support the new 48 channel Triple Play Midi interface. As with many of



Memory savers have been included - most users will need them.

the other facilities the links are via new tools that replace the existing Midi-Out tools with ones that send your track data to any one of the three individual, and totally separate, Midi outs available on the Triple Play interface unit.

What is likely to surprise you is that, in terms of the overall facilities

provided by Bars & Pipes Pro 2, all of these facilities are really only the beginning of the story. As well as unlimited tracks you have tools can be made to work on whole songs/tracks or defined sections, plus individual re-channelling on both input and output sides of the track pipelines.

There is automated mixing via the MixMaestro utility plus all the usual stuff like Midi-file support (and Midi player tools), sysex options and conductor tracks, with extras like

Tool window to build a 'macro tool', a combined arrangement, that can then be permanently stored and used just like any other tool.

transport window for instance contains familiar looking start, stop, play, rewind, fast forward, record and loop type controls.

Conclusion

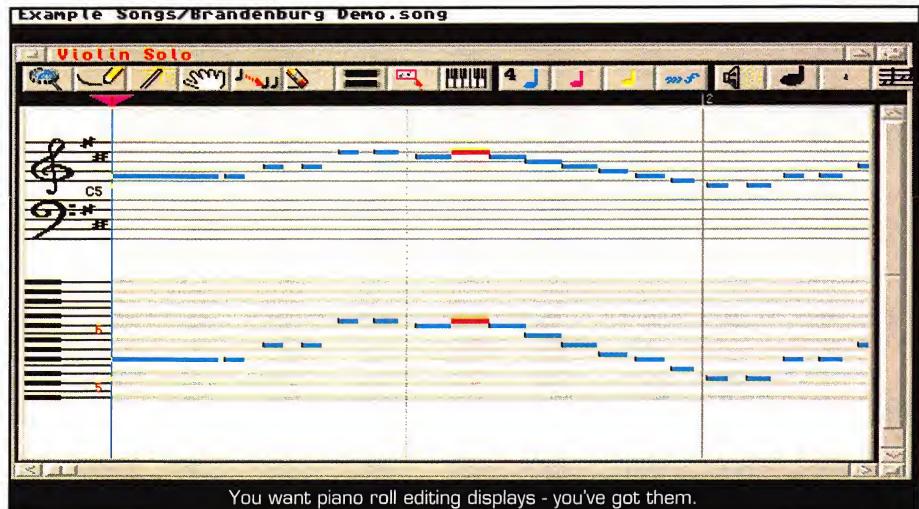
Bars & Pipes Professional contains so many options that there is just isn't the

the package (Paula Abdul and Thomas Dolby are two recent converts). Price £299 (existing Bars & Pipes Professional users can upgrade for £116.32). **a**

Bars & Pipes now has extremely powerful multi-media connections which provide support for IFF still and anims display, links to Scala, IV24, the Sunrise digitizers and so on.

sequence

The general sequence editing facilities are equally brilliant. By drawing a box around a collection of notes operations such as quantizing, transposition, modulation and filtering can also be performed on selected groups of notes. When detailed MIDI numerical data is needed you just click on the event and a window appears giving the full MIDI data. Icon based edit facilities are



You want piano roll editing displays - you've got them.

snag

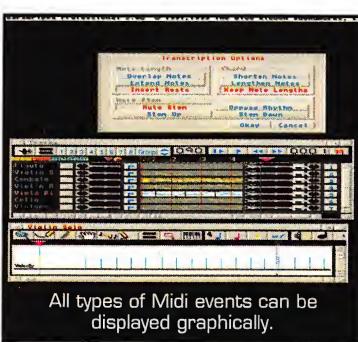
Bars & Pipes Pro is a brilliant piece of software which, in practice, suffers from only one real snag - the amount of memory needed to run it. The

space to mention them all. What can be said is this... for creative recording there's not another Amiga sequencer that can touch it and there are a growing number of professional users (both stars and studios) that are now using

INFO

Price £299 (existing Bars & Pipes Professional users can upgrade for £116.32).

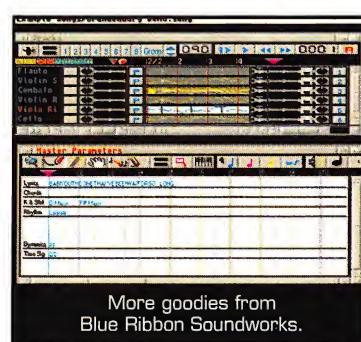
Contact:
Meridian Software Distribution
Tel: 081-543-3500



All types of Midi events can be displayed graphically.



B&P, like all good packages, provides global tempo maps.



More goodies from Blue Ribbon Soundworks.



The automated mixdown and Multi-media connections!

internal sounds support and guitar tablature facilities thrown in for those who need it. Video/film oriented users have timeline scoring and SMPTE facilities (with accessories available for Phantom support)... the list is endless. And I really mean endless because if (by chance or otherwise) you arrange a collection of tools in a way that seems particularly useful... you can use Bars&Pipe's Create-A-

supplemented by direct input of notes from a MIDI keyboard. The graphical song construction window makes it easy to build up multi-track, multi-sequence songs and there are some very powerful song parameter options which let you define lyric lines, chords keys/scales, rhythm data, global dynamics and time signatures. There are of course some conventional touches. The

package is massive and although just about useable on a 1 meg machine (providing you use all the memory saving facilities such as closing the WorkBench, and reducing the display to grey scale) a more realistic set up for serious work would be 2-3 megs of memory along with a hard disk. This is especially important if you intend making full use of the multi-media facilities.

Ratings: Out of 10

	0	2	4	6	8	10
FEATURES						
EASE OF USE						
PERFORMANCE						
DOCUMENTATION						
VALUE FOR MONEY						
OVERALL RATING	0	25%	50%	75%	100%	86%



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test drive

REAL 3D

Well, this is the real yummy bit about animating. The R3D2 has an amazing array of animation possibilities; Path, Rotate, Sweep, Size, Stretch, Direction, Control Curves, Skeleton, Kinematics, Morphing, Transform, Wave, Radial Force, Directed Force, Tangent Force, Collision, Friction, Creation, Chain, Weird Force... And it doesn't stop here. It's perfectly possible to write your own types of animation in R3D2's own programming language, RPL. If you like programming. I don't.

Anyway, all these animation methods can create some pretty wacky animations. The nice thing is that you build animations in the same way that you build everything else in R3D2. By using the hierarchy system and simply adding, cutting, copying and pasting animation methods within this. This is a really nice idea. It makes everything very logical and it also means that you can select a constructed animation without the objects and save it separately, as if it WAS an object. You can now build up a library of animations that can be loaded into any project and used with any objects or scenes.

The animation methods themselves, are incredible but not always very accessible. Most of the real-world physical forces can be re-created in R3D2. Gravity, friction, elasticity, momentum, mass,... Set up a bunch of bowling pins. Give them all mass, collision detection and friction. Send the ball in the right direction. It will spin because of friction with the floor and when it hits the pins, they will all (if you're a good shot) fall over, bouncing and spinning off each other and the floor. If only it were quite that simple. Unfortunately, the variables and formulas that control these complex actions and interactions are, variables and formulas! That is, you have to type them in and work them out. They are called TAGS and objects and animation methods can have many different TAGS. One for friction, one for velocity, one for centre of gravity etc... It's a bit disconcerting, to say the least. Could we not have a visual representation of all of these? Pleaseeease?! I'm not a programmer. I just want to animate things.

Let me just reiterate though. There is NO other program that can



This robot means business and so does Real 3D 2. It's a heavyweight beast.

even come close to the animation possibilities of R3D2. It's light years ahead of the current opposition. I just wish it were easier.

speed

Lots of bold claims here. Even a special 68040 only version. Is it fast then? Er. It's difficult to say really, oh all right then. Build a scene, add your textures and then add a few of the extra special things that only r3d2 can offer. Depth of field, a bit of motion blur, some soft edged shadows and let's use a couple of B-Spline meshes with brushes that stretch as they move. Cool. And wait. It doesn't LOOK very fast to me. Actually it looks pretty slow. The problem is that it's all relative. You have to bear in mind what the program is doing, that most programs can't do. B-Splines are incredibly slow to use. Soft edged shadows are also very time consuming and so is motion blur. Depth of field is great though. No extra rendering time at all. If you're using this to produce commercial animations on a daily basis, then there are a lot of effects and techniques that you will never use, because they are simply too slow. If, on the other hand,

you are just producing stills or you're an enthusiast with lots of time, then that's fine. It's not so much of a problem.

The answer is, the Amiga is NOT fast enough. My A4000/040 is too slow for this complexity of work. We need a faster machine. This could be an Amiga 5000 (with a



Illuminating modern art, downloaded from Activa's BBS.

68060 (or more than one?) or RISC (s?) or it might be a custom rendering engine, like the Newtek "Screamer" (a 600 MIPS beast that would cut rendering time down from 60 minutes to seconds but costs \$10,000, worth it, I think).

From the point of view of a professional 3D animator, who does this for a living, I can't spend more than about 15 minutes a frame, rendering. This gives a 5 second

animation a 31.25 hours rendering time, during which my A4000 can't be used for anything else.

documentation

The manual is big but very well designed. It's full of tutorials and this is supported by over 100 pre-supplied projects for you to play with. The one area that the manual lacks in, is depth. The more complex functions, like TAGS, that need detailed descriptions and examples, seem to be left lacking. They are too quickly brushed over and it is these areas that usually cause the problems. I suppose really, that the manual is simply not big ENOUGH.

The problem with products like R3D2 is that they are highly complex and WILL take a long time to learn. There's really no way of getting around that fact. If you want to do complicated things with advanced programs, then you are going to have to spend a lot of time and effort learning them. Too many people seem to think that it's the software's fault that it's difficult. The fact is, that it's intrinsically difficult by the very nature of what you are doing. BUT, the software plays a vital role in allowing you access to its power in an intuitive and accessible manner. Yes, the business of creating complex three



An inviting sauna, where can I get a VR steam suit?

dimensional animation is not as easy as making toast BUT it's my job to see that it's not UNNECESSARILY difficult. Have the programmers done all that they can, to make your life easier? Have they given you access to all of the program's power? Have they implemented intuitive, logical and visual means of control? Are you happy?

Well, it's a tricky one but here goes. There is no doubt that R3D2 is



(C) 1993 Pixel Perfect Computer Graphics

Pictures of this quality will not come easy to new users of Real 3D 2.

Barry McCarthy completes the test drive on the major Amiga animation program. In with the dongle and away we go, for the final part in the exciting new world of R3D2...

one heck of a powerful package. It has features that I only dreamt of using until its release. Particle modelling, depth of field, motion blur, unlimited numbers of textures and wraps, collision detection, kinematics, soft edge shadows. The texture wrapping possibilities seem endlessly adjustable and flexible. It has the largest collection of modelling tools I've ever seen. The quality and impact of the rendering is astonishing (when you get it right!). And the animation system is easily the most powerful on the Amiga.

What I don't like, surprisingly, is the interface. I know, I know, it's user-configurable. It can be any interface you like! And that's the problem. It's like being given a blank canvas and told "Hey, just paint something

really good..." It's a nightmare scenario, it just makes me nervous. What I feel you need, is a STANDARD interface, that you CAN customise if you wish. It's the job of the software designers, to design the ideal, efficient and most user-friendly interface. I really DON'T want to be doing the designing myself. It just feels like a bit of a cop-out by the programmers. Yes, I know it's a powerful and advanced system but it feels very much like I'm being locked out of it. It feels messy and incomplete, like an enthusiast's program that only the truly

dedicated will persevere with. It seems strange after the marvellous interface of Real 3D 1.4, that this should simply be thrown out of the window.

Conclusion

Look, I would just like to make a quick statement here: I have been using Amigas for around 7 years, teaching, training animators, animating, drawing, DTPing and writing and reviewing. I have run an animation company for some time, using most of the big 3D programs available on the Amiga. So, I should know what I'm doing and I

should feel reasonably expert on this platform. I do. I've had R3D2 for over a month now and I still can't get the interface to do what I want. It still feels awkward and frustratingly illogical at times. I like masses about this program but what I like and also dislike the most, is the potential it offers. It remains potential and I still haven't realised it, if you see what I mean. If I could spend a couple of weeks solid, on this program, I'm convinced that I would use it in preference to any other, currently available. Unfortunately, I don't have this much spare time to spend staring at my monitors. Professional animators are NOT going to spend weeks at a time, learning a new program, before they can produce anything with it. It's just not viable. What they need, are programs that let you into their secrets slowly, bit by bit. Classic examples would be Deluxe Paint and now Brilliance and yes, Real 3D Classic. They appear, on the surface, to be fairly simple programs but as you use them, so they become more and more advanced, as you peel back the menus and reveal their many secrets. They become advanced and complex programs at the same speed as your learning curve. Real 3D 2 does not do this. That's my criticism. **a**

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Ratings: Out of 10

	0	2	4	6	8	10
FEATURES	██████████					
EASE OF USE	██████████					
PERFORMANCE	██████████					
DOCUMENTATION	██████████					
VALUE FOR MONEY	██████████					
OVERALL RATING	0	25%	50%	75%	100	80%



Red '57 Chevy, an American classic, rendered by Real 3D, a Dutch classic.

test drive

The name "Brilliance" has been on every Amiga artist's lips for almost two years since we first heard of fresh competition for EA's ageing Deluxe Paint series. Faster brush, painting and animation handling was promised which alone was a good sign of things to come. But as the wait extended, the brilliant colours of the much seen Toucan of the advertisement for the product that didn't arrive began to pall.

Finally, however, Brilliance has arrived from Digital Creations, and the burning question is "Was it worth the wait?" The answer is, yes! Before you put down your copy of AUI and hurry to order a copy of Brilliance, I suggest, however, you take a look at the price tag in the Info box and settle down in your favourite armchair and find out what Brilliance has to offer you. (And that is somewhat more than just the pics of that toucan included in the package itself which some publications in their rush to cover it seem to think is all it can do!)

two for one

Brilliance is not one paint package but two. The first is for painting with registered colours only. That means it supports all screen modes from 2 colours up to 64 (EHB) out of 4096 colours, and up to 256 out of 16.8 million on AA Amigas. All resolutions are available too, depending on what your chip set can offer.

The second program, TrueBrilliance, provides support for all HAM modes which boils down to drawing with 4096 colours on-screen with original and ECS Amigas, and over 1/4 million on-screen colours with AA Amigas.

Furthermore, TrueBrilliance goes beyond the number of colours you can see on-screen and uses either a 15 or 24 bit colour buffer - on any Amiga. In practice, if you select a 24 bit buffer and fill the screen with a gradient going from blue to red, the gradient is stored in the Amiga's memory using a 16 million colour palette - regardless of which Amiga you have! Very neat.

There are two advantages of using a 15 or 24 bit colour space. First, the image always retains its definition and HAM fringing and colour ramping doesn't effect the actual image stored in the buffer. (You can load in 24 bit images, edit them, and then saving them with no quality loss in 24 bit! Wow!)

Graphical

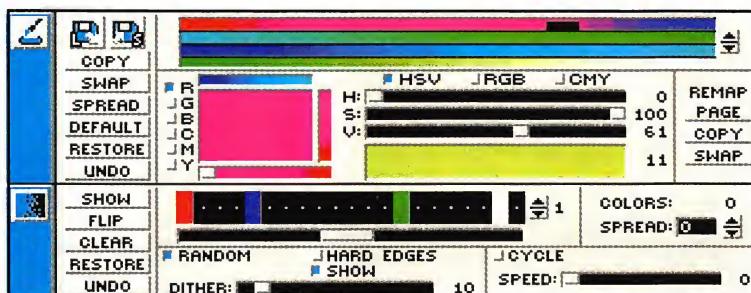


A slice of brill creativity can be a powerful thing as Gary Fenton reveals test driving a long-awaited paint package.

Second, if you save the image as a 15 or 24 bit file you can view it in its true colour fidelity using a 24 bit graphics card. Or, owners of 4096 colour Amigas can see the image in 1/4 million colours if they upgrade to a A1200 or A4000.

tools

Brilliance doesn't use pull down menus. Instead you can access all of the functions through the tools panel. This sits at the bottom of the screen and holds a selection of icons. Right clicking on an icon will bring up another panel which attaches itself underneath the current active panel/menu. You can



The palette and gradient menus can be used simultaneously.

fill three quarters of the screen with menus!

The basic drawing tools include dotted draw, connected draw, filled freehand shape, line, connected lines, filled lines, curve, bezier curve (just like a DTP package!), rectangle, ellipse, fine airbrush, splatter, and fill.

brush control

Brilliance offers not two but eight buffers to store your own brushes. Any brush can be saved to disk or to the Amiga's clipboard.

Distortion takes place from another menu and effects include

Brilliance

resize, flip, bend, shear, rotate, outline and crop. The feedback from these effects is realtime, albeit in a single solid colour. Brilliance will replace the solid representation of the brush with your distorted brush whenever the CPU can catch up with you. It's a good idea and comes as a blessing for slower machines.

Anim brushes have their own menu too. From here you can

choose up to 128 colours and place them in any one of the current ranges.

The type of fill can be decided upon from the Draw Mode menu. Options applying to gradient fills are horizontal, vertical, linear, highlight, spherical and radial. Of course, you can use a brush pattern instead as a fill effect. Brush fill modes are stretch, pattern, shape and perspective.

use as your stencil. Adjusting the variance sliders will allow for some "play" on the flesh colour which will extend the stencil over both darker and brighter shades of flesh. Very, very useful!

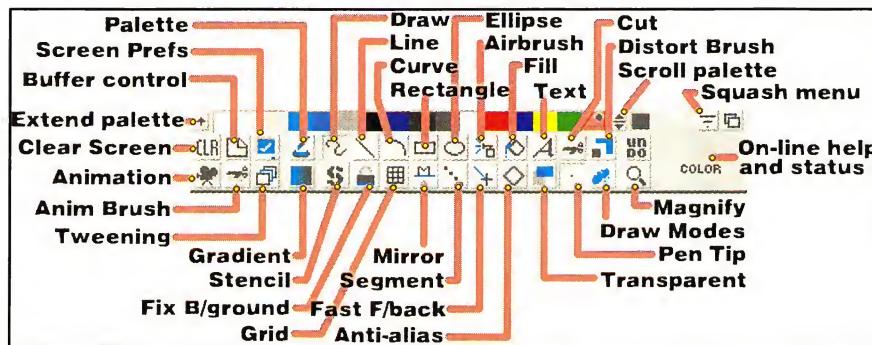
anti-aliasing

Brilliance proudly provides four levels of anti-aliasing which not only work with drawing and pasting down brushes, but actually anti-alias resized brushes! Sadly it doesn't extend to other brush distortion effects, unless you paste the brush down after the distortion but that's not as effective.

which makes Brilliance act on either RGB or HSV colour levels.

To add more icing to the Brilliance cake, it will give you a preview of the transparent effect if you hold your brush still over an image. Obviously, the faster your Amiga goes the quicker the preview happens. Fast previews also work in other special modes including negative, dither, stencil, darken, brighten, colourise, and tint. Another nice touch to smile about!

draw modes



Explanation of the icons on the menu menu.

morph any two brushes together (similar in effect to DPaint) and a novel feature which can fit, say, a 30 frame animbrush down to just 20 frames.

palette passion

Brilliance goes out of its way to bring you methods of mixing colours. Four of them. There are RGB, HSV, CMY, and the colour cube with an intensity slider. I'm used to mixing with RGB components but someone who has a background in printing or colour photography will probably prefer using CMY (cyan, magenta, yellow) components.

The only thing lacking (though hardly essential) is an artist's mixing palette as used in DPaint IV, OpalPaint, Paintbox etc.

fill me in

The best way to produce colorful filled shapes is via the gradient menu. It's very similar to DPaint IV's range menu but Brilliance allows

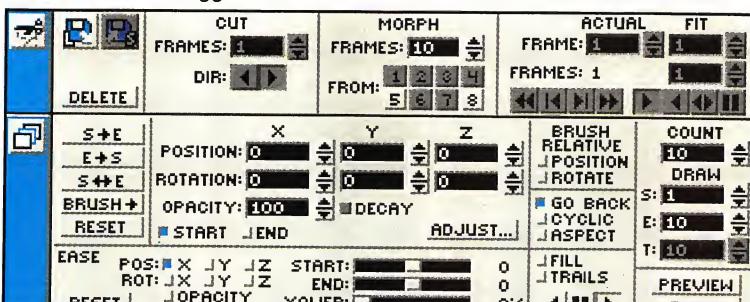
use stencils

Brilliance sports two different types of stencils which can be used at the same time. The 1 bit stencil mask allows you to draw a stencil directly onto the screen which protects the area laying beneath the stencil.

The other type is a colour stencil. This is far more versatile than a simple mask because Brilliance will create a stencil for any colours within a tolerance limit. (Tolerance limits apply only in HAM modes.) For example, if you wanted to cut out or paint around a human hand, you'd simply choose a flesh colour to

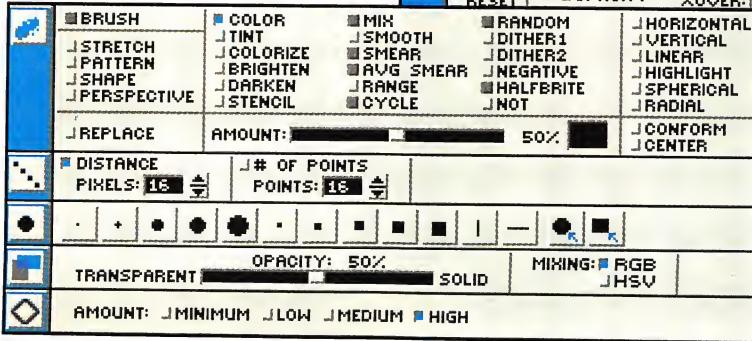
see it through

Brilliance has given transparency its very own icon which is available from the main menu. Transparency levels can be specified as a percentage using a slider. There's a toggle button



The Anim Brush and Tweening menus be controlled as a percentage by using a slider. The higher the percentage the greater the effect applied to the current brush. This is handy for creating subtle shadow and highlights.

beyond undo



Menus from top to bottom: Draw modes, segment, pen size, transparency, and anti alias.

Perhaps unique to an Amiga bitmap paint package is Brilliance's undo

test drive

Graphical Brilliance

continued

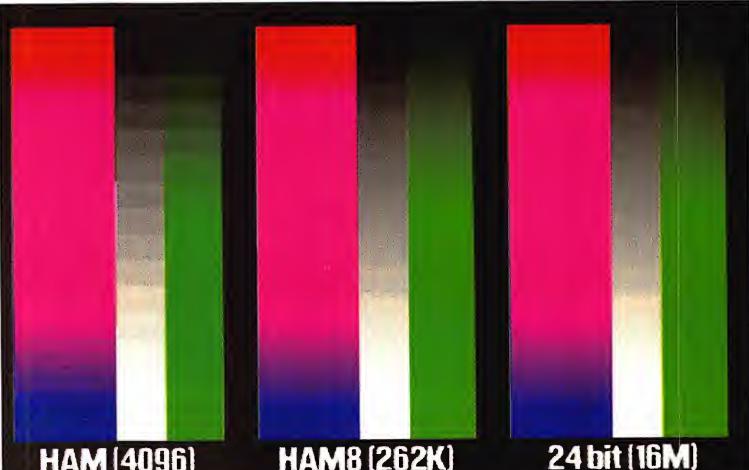


A selection of different effects.

Right: Easily created using a true 24 bit buffer on any Amiga. Soft shadows are created by stamping down a brush several times, each one slightly offset, using the Darken draw mode.

feature. You can allocate an undo buffer of a variable size. The larger your buffer, the more you can undo things. To demonstrate this just imagine I've drawn a stick man. If I press undo once the man's leg will disappear. Press it again and the other leg goes. Again and his body vanishes....

The redo feature does just the opposite and brings back anything that you've undone! These combined features are ideal for experimenting and changing your mind and retrying ideas. Of course it's especially handy if your mate thinks it's funny to draw obscene doodles on top of your latest masterpiece while you've popped out for a coffee.



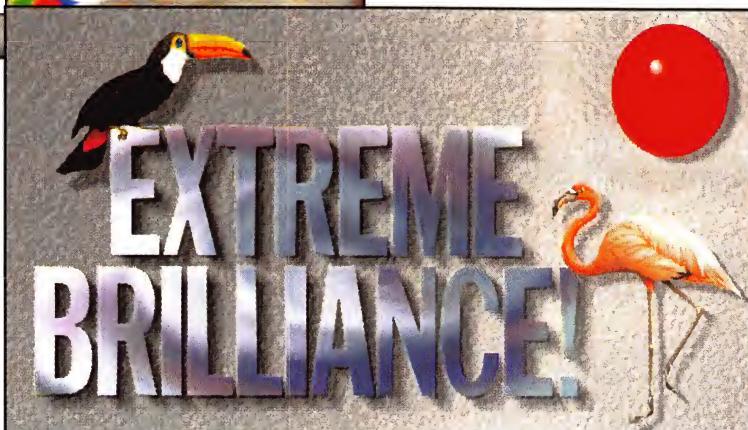
A graduation created on a 4096 colour Amiga: Left, the image as seen on a 4096 colour Amiga; Middle, saved as 24 bit and loaded up on an AGA Amiga; Right, original 24 bit buffer.

System Requirements

To run Brilliance you can use any Amiga with 2Mb of RAM and 2 floppy drives. A recommended system should have at least 4Mb RAM, a hard drive, an 020 or faster CPU, Workbench 2 or 3, and the AGA chip set for more colours.

allows you to place the brush in its ending position using the mouse. It works out the calculations for you and ensures you get it right nearly every time.

Apart from position and rotation control you can also benefit from the opacity controls. Your brush can gradually become transparent as the animation progresses, or if you activate the Trails and Decay buttons you can produce motion blur or a tail of a moving comet. If you don't like the results you can undo each frame of the animation providing your undo buffer is large enough.



Movement and tweening are on a different menu called Tweening. The concept of this menu is closely based upon DPaint's move requester but it takes animation control a stage further.

With DPaint you had to place your brush in its starting position and then numerically tell it how to manipulate the brush. Brilliance will do the same, but it additionally

and more...

Magnify works with up to 31 different zoom levels and the magnified area can be made larger or smaller. You can optionally have the magnified pixels segmented which puts a black border around each individual pixel.

Other features which sometimes come in useful include background fixing, an adjustable (snap to) grid, segmented draw modes, fast feedback, and mirror. The mirror is not as good as DPaint's because you can only have a maximum of 4 reflections and it doesn't have a cyclic option.

spare a buffer

Brilliance gives you as many page buffers as your system can handle. You can load in hundreds of animations and pictures into memory which have their own palettes, providing the screen resolution is the same throughout. Time to buy some more RAM...

conclusion

Brilliance is exactly what Amiga artists have been dreaming about for a while now. It fulfills all of my requirements and fares very well compared to TPaint and OpalPaint and it laughs all over DPaint! My only gripes are the lack of a proper soft airbrush, no light table for animation, text brushes limited to the size of the screen, and no JPEG file handling. Also, you can't magnify and select the first point and then zoom out and select the second point (for cutting brushes and drawing lines) which DPaint can do.

The biggest bellyache is the annoying dongle that must be plugged into the second joystick port at all times. It doesn't have a through port which means any other device which uses the same port must be unplugged. That includes GVP's G-Lock and some Rombo digitisers.

My advice? If you can afford the price then you won't regret buying Brilliance. It tops DPaint (at least twice as fast!) and any serious artist is strongly recommended to check out Brilliance today! **a**

Ratings: Out of 10

FEATURES	
EASE OF USE	
SPEED	
PERFORMANCE	
DOCUMENTATION	
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test drive

The CDTV Scene

ALL CHANGE!

Janet Bickerstaff explores an exhibition centre which combines some past glories with the technology of today's Amiga CD.

The Amiga CD32 is more than just a games console. Already Commodore's latest machine is being used for a commercial application. When the London Transport Museum in Covent Garden re-opens its doors to the public in December after a £4 million redevelopment, the displays will be controlled by Amigas. A total of 109 Amiga CD32 consoles will be used to provide interactive information using text, video, animations, and

sound effects. A number of Amiga 4000s will also be taking care of display control and simulations. All the machines will be networked using system developed by Index Information Ltd.

The London Transport Museum, which opened in Covent Garden in 1980, provided a new use for the beautiful building which was once Covent Garden Flower Market. Since its opening two and a half million people have visited it to see the London buses, trams



Amiga CD32 on the buses.

and underground carriages on display.

Now it will be even better. A gallery has been built high among the columns and girders of the glass-domed roof and, in an awe-inspiring feat of engineering, railway carriages and engines weighing two hundred tons have been raised to this level. This will allow more room to display a collection of buses and trams dating back to the horse-buses of the last century. There will also be a two-level restaurant area and a larger shop.

Visitors will be free to explore the Museum as they wish. Detailed information on each exhibit will be available on screen at the touch of a button in English, French, German, Spanish, Italian, or Japanese.

working

Mick Tinker, Technical Director of Index Information Ltd, told *AUI* "The Amiga CD32 with its high quality graphics, double-speed CD drive, 32-bit processor and custom display hardware, provides the ideal platform for audio visual and interactive displays (AVIDs). Its high quality and low cost have enabled

us to provide advanced displays at a much lower cost than competitive systems."

Local information points using touchscreens will be placed by the twenty-nine major exhibits giving the historical background using period photographs and technical information. HAM8 title screens and 64 bit wide sprites have been used. All the computers will be installed in a control room and, because the

The CD32s are

synchronised so that

sounds fade in and out

to prevent inter-area

interference.



Train spotters and anoraks will be chuffed with this museum.

system is networked, any failure should (we hope!) be spotted in seconds by the monitoring Amiga. The system can be used to inform the public in the case of an emergency. Individual screens can also be targeted.

One of the most interesting exhibits is a modern Optare bus which is controlled by an Amiga CD32. Sitting in the seat starts the engine sound and operating the controls allows the generation of a

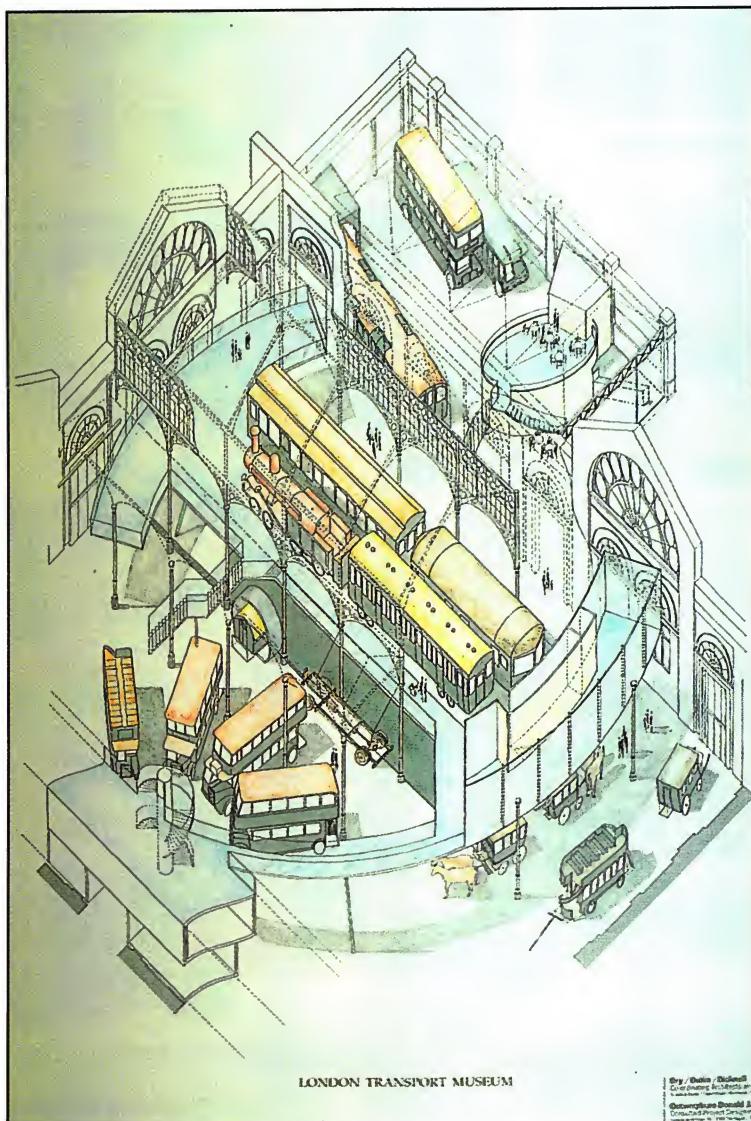


Nick Tinker, Technical Director, Index Information Ltd.

complete range of realistic sound effects to give the feeling of actually driving the bus. Another sound experience is fitted to a RT bus. Infra red sensors detect the presence of passengers and start to generate engine sounds. The vehicle's movement sounds are introduced by operating the bell push, and three "dings" will bring about an emergency stop. (Yes, we've all wanted to do that sometime. And now's your chance!)

Six more Amiga CD32s provide ambient CD quality sounds to match the various historical areas of the museum, from horse drawn carriages to modern vehicles. The CD32s are synchronised so that sounds fade in and out to prevent inter-area interference. "Authentic" smells come from essences gently warmed to give that extra touch of realism. (Gas masks are not supplied!)

The Amiga 4000 has its place too. For the railway enthusiasts three tube train simulators are under development, one each for 1890, 1938 and 1992. The 1890 simulator uses 1,800 raytraced DCTV images (approximately 150MB) and sampled sound. The total sequence displays around 9,000 frames. The graphics development took over three

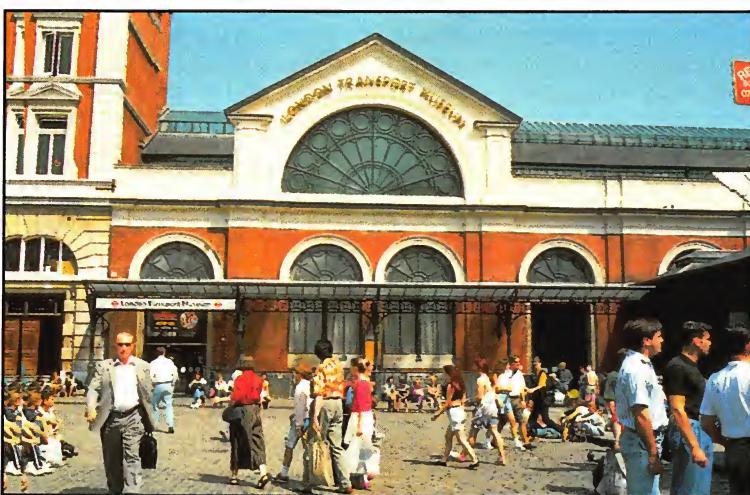


The £4 million Transport Museum redevelopment.

simulator is being written using an A4000/040 combined with a fast SCSI-II hard disk controller, 18MB of main memory and 1GB of storage. There are 2,000 raytraced high resolution HAM8 images (450MB) and sampled sound. In the

1993, remember that all the touchscreen displays and simulators will be working thanks to Commodore's Amiga 4000 and CD32!

Considering the terrible mess that transport is in our capital city - where the speed of the road traffic today averages about the same eleven miles an hour it was at the beginning of the century and the Underground is virtually falling to pieces for lack of investment - "London Transport" might be thought of as an oxymoron - a self contradictory statement. Perhaps what the Government needs is to be taken to the Covent Garden museum and made to look at what was in the past an efficient transport service and a source of pride for everyone and what an investment in up-to-date technology can do when used imaginatively. Or is the commonsense that an Amiga user might think natural too much to expect of our present rulers? a



Museum goers transported to sunny Covent Garden.

months using 68040 computers and Real3D. This exhibit will be housed in a full sized mock-up of the driver's cab complete with brass fittings. Visitors will realise that in 1890 there was a total lack of safety equipment! (But the state of the railway and the roads was probably better.) The 1938 tube train

simulator for the 1992 train an A4000 is used for the main simulator display and a CD32 for the instrument panel. In operation the CD32 and the A4000 communicate via a serial link which has been developed by Index Information Ltd.

When the London Transport Museum re-opens in December

CDTV NEWS

Almathera Systems have released CDPD III and, once again, the CD disc is packed with all sorts of goodies.

There are the Fred Fish disks 761 to 890, ready to run from the CD and also in LHA format for BBS use, plus 135MB of other Public Domain files ready to run.

CDPD III includes hundreds of classical books in ASCII text format. This could be a real boon for someone who is disabled or housebound. As long as they can cope with a remote control or a mouse and are happy to read from a monitor, then there are endless hours of enjoyment on this disc. Authors range from Aesop to Wilde, taking in such literary giants as Lewis Carroll, Chaucer, Daniel Defoe, Thomas Hardy, Shakespeare and Jules Verne. You could even impress your friends with quotations from the sayings of Confucius. On screen Help explains that some of the books require more than 1MB of RAM to load. These can be viewed via the CLI or you could add more RAM.

The disc includes dozens of original 24 bit scanned graphics plus HAM and AGA HAM-8 versions, and hundreds of IFF clip-art images. For the enthusiast there is the Amiga Report International Online Magazine (issues 101-119), which contains all the latest gossip from the States.

The disc works on CDTV and A570 CD-ROM and any SCSI-CD-ROM with Amiga drivers. For the Amiga CD32 a mouse is required. Many files will require a keyboard and/or floppy drive (not yet available on CD32). The RRP is £19.95.

Contact: Almathera Systems, Challenge House, 618 Mitcham Road, Croydon, CR9 3AU.
Tel: 081 683 6418

INFO

Index Information Ltd

Tel: 0256 703426

London Transport Museum

Tel: 071 379 6344

PICTURE FRACTIONS

COOMBE VALLEY SOFTWARE £14.99

You are invited to a party! The Hatchday Goblins would like you to join in with some games in their caves. But this is no ordinary party - it's a Fractions party, and there is magic too. Do you want to play Puzzle Face? Yes of course you do, after all it's no fun if



you don't want to join in the games, and this is the favourite of all the Goblins' games.

On one wall of the playroom is a large block puzzle of a Goblin face and by saying a magic word, all the pieces vanish and are hidden round the Goblin caves. The idea is for someone, called the Puzzler, to find all the pieces and put them back in the puzzle. The other goblins are catchers and they hide round the caves as well.

If the Puzzler gets too close to a catcher, they are asked a fraction question. Get it right and the puzzler carries on, but if the answer is incorrect the catcher removes the piece and hides it again.

The catcher also puts a piece into



Another room, this time it's a classroom

a second puzzle, the sad face.

The Puzzler wins the game if he/she can finish the Puzzle face before the Sad face is completed.

Picture Fractions is designed to help children recognise fractions in picture form and to express them as numbers and words. There are three levels

There are plenty of fraction puzzles here.

of difficulty, easy peasy, easy and hmmmm. At the most difficult the fractions use numbers only.

The room scenes are imaginative with clear text and graphics. However, the program assumes a reasonably good reading ability - for example you are asked 'What fraction of the Neogoblin ice cream is pondweed colour?'. The player would also need already to have had some practice in fractions, which makes their recommended age range - 7 - 10 years, a little optimistic. Added to that, the instructions were not sufficiently detailed and the program relies on the player



6/10

The playroom contains the Goblin puzzle.

being able to work out how to play it.

We are all for brief manuals, but they should provide enough information as a reference. It took us ages to work out how to get the collected pieces into the picture, (by reversing all the directions taken to reach the jigsaw piece) and it was only when my 12 year old tester came in that her methodical and logical brain helped us to move on. In fact Victoria enjoyed the program a good deal more than her 9 year old brother, even then it took her an hour to get through level one, with no incorrect answers.

The text has been written to appeal to top juniors with such thrills as the mouth blowing a raspberry (loudly) and the descriptions of the fractions include an eyeball collection and a hot choco slime mug. The game recognises about 200 words, although it can be completed by just using the main commands. However, the others are there so you can explore the place and of course to answer you back - such as 'don't be silly'.

I've been to better parties, but as a means of making fractions fun, this program must be commended. **a**

PUBLIC DOMAIN AND SHAREWARE

Roberta Smith DTP offers an extensive catalogue of disks in the library, detailed in a neat little publication. It lists the top ten programs as well as disks in the news all for the Amiga. In addition, other disks not listed are available by sending her a blank disk with a stamped addressed envelope and they will include the catalogue you require.

The next issue of **AUI** will include a review of some of the disks. Contact: Roberta Smith DTP, 190 Fallooden Way, Hampstead Garden Suburb, London NW11 6JE. Tel: 081 455 1626.

NBS DomainATION is another public domain newsletter with reviews of new titles, classic titles and has a new section for the A1200. The CLR (Central Licencing Register) includes a wide range of educational disks and the catalogue is available from NBS 1 Chain Lane, Newport, Isle of Wight..PO30 5QA. The so-called 'chatty bits' are contained on a separate newsheet, sent out to regular customers.

They are always interested in new programs but say they are 'pretty fussy' about what they take, and usually reject 10 programs for every one they accept. If you are game to try or want the catalogue, contact: NBS on 0983 529594.

constant factors

Video Column

HAMMER HORROR? No. Hama

Well, by this stage, you have your VideoPilot for frame accurate edits and you obviously have your Amiga for the ultimate in titling, animation and graphics, so you're all set to make the hottest movie since Jurassic Park. Sorry to tell you, but there's one essential item still outstanding. While your graphics will glow and your exacting edits will excite viewers, without a sound mixer you will be found wanting!

When making movies, during the editing process you have to decide whether to make your transition from the visual or sound angle. In professional studios this is no problem, but for hobbyists using prosumer equipment, it is. It would be fair to say that most video editing equipment in this area, including the VideoPilot and EditMan, intends the user to edit his film visually. When you have done this and played back the edited film, you will undoubtedly find that many of these visual edits produce jarring audio transitions that are very obvious.

The one thing that makes a final edited video appear professional is an uninterrupted soundtrack. To achieve this you will need a sound mixer and there are many of these on the market - from less than £30 at the cheap end to 'the sky's the limit' at the top end, as is usual for computer or video kit! Thanks go to Trevor Hall of the very active Cranford Community Centre Amiga Group, who introduced me to, and kindly lent me, his "Hama Video Mixer, VM-518," which turned out to be a splendid piece of equipment.

Measuring just 9 x 5 x 2 inches, on the rear of the unit there are eight phono connectors.

As the unit is stereo compatible, there are two sockets for each audio signal. These may be converted by 'two into one' leads if you work in mono. Two inputs are for an external music source - CD, cassette or whatever, and two inputs are for the input from the audio on your source video recorder. Two outputs are the mixed signal to go to the final video recorder. The two remaining phono sockets are video in and video out; composite signal only I'm afraid, there's no Super VHS sockets. In addition there is a mini-jack socket for a micro-phone, to overdub a commentary while viewing the tape.

controls

On the top of the unit are six slider controls. The two for video signals control a fade in/out facility and the degree of video enhancement (see later). The four audio faders control the audio, music and microphone inputs and the fourth is for setting the overall output level. They operate very smoothly with no signs of audible or visible noise on the video copy. My only criticism would be that the fader travel distance of only one inch doesn't allow for ultra fine control.

The fader enables you to fade scenes in or out - to either a black or white background. For me, the second controller - the

not required, whilst adjusting the input level of the music to suit. As with any process of this nature, a little practice is necessary before precise control is obtained. Once it has been though, you are well on your way to producing the next blockbuster.

The Hama stereo Video Mixer is available from Tecno stores at £69.90.

Telephone: 081 989 2772.

what lola wants

I remember "Lola" being a real standout single from the Kinks (*Don't flaunt your age!* - Ed), but now it's another electronics

company producing Amiga peripherals. The designers of the MiniPro L1000 claim to be the very same that produced

the original MiniGen many years ago - I had one myself and I bet many other people did too, at under £100.

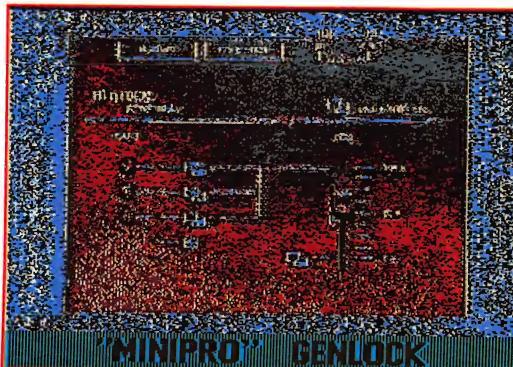
This new model looks nothing like the original and the makers claim that the specification and results are similarly far removed from the MiniGen. At less than £150, a genlock claiming to be at the professional level deserves a close look and we will be reviewing it in the next issue.

I don't know the technicalities involved here, but the gain in sharpness seemed to be achieved by greater contrast and better colour saturation in the copy. There is a 'split-screen' switch which enables you to compare the unenhanced and enhanced picture on the same screen, showing the visible difference. Trevor says that now he always uses the Hama when copying video tapes and I must admit I can see why. It's almost worth buying for this function alone.

However, back to the basic reason for the unit - sound mixing. Using the music or microphone inputs as required, it soon becomes a simple matter to watch the video as it is being copied, and fading the original soundtrack out when



Mix audio and video with the Hama sound mixer.



The new MiniPro from Lola

If you can't wait and want further details, phone "Lola" - No, make that Tony Banham at Lola, on 0858 880182. **a**

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entertainment now!

David Taylor and Andy Moss separate the wheat from the chaff in the games world.

One of the Elite

Ex-Commodore MD, Kelly Sumner, is one of the top people in the home computer world. Now heading video game giant, Gametek, he talks exclusively to David Taylor.

A rainy day in Slough, a strange taxi driver and sodden reporter did not mix well and I thought little could lighten my mood. Then Kelly Sumner took me into his office, supplied a much needed coffee and grinned from ear to ear as he talked about Gametek's future releases.

elite 2

Kelly kicks off with the ace up Gametek's sleeve: Elite 2: Frontier. My ears prick up, my spirits rise and the dictaphone's tape happily starts to record.

"Up until very recently it was always the idea that Elite 2 would be released under the Konami badge. They had decided quite

would be best if we dealt with Elite 2 as well." Elite was the first British product to top the US charts. The only phrase to sum up that Elite is 'a revolution in computer games.' In fact, we get calls now from the Elite fan club! We had a guy who phoned last week who was proud to be able to claim to be the fifth person in the world who had become 'elite'."

"Elite 2 is thankfully not just a sequel. David Braben has put a huge amount of time and effort into it. It is what Elite would have been, had it been released now and to try and describe it is very, very hard. It will be the number one product this year on the PC and it's likely to be the same on the Amiga. People will not be playing it for one or two months, they will still be in a year's time."

"Looking ahead, David Braben understandably doesn't want to wait another five years before he releases another product. There are lots of variations that we could do on the Elite 2: Frontier side. So, it's going to be big, big, big, big..."

"I don't think it will appeal to the casual game player, because although the graphics are good, it's not the look of this game that's important. It's the gameplay and this is nowhere near as superficial as in a lot of games. This game has incredible depth. So the

person who really wants value for money is going to do well out of Frontier."

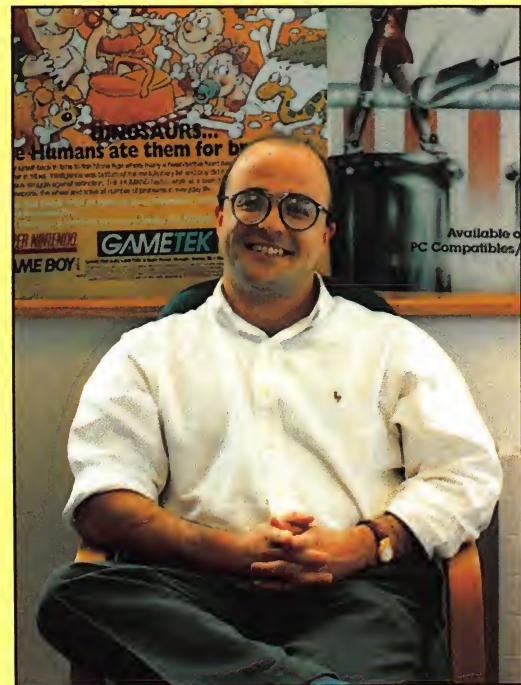
"The reason it's taken so long is that there hasn't really been a team developing it. David has done it on his own. He's been perfecting it and nobody has been pushing him."

"It's not easy to move from the lively conversation on the most awaited sequel ever, but the topic changes to Gametek's other projects.

"Aside from Elite 2, we have Batman Returns, again from the Konami stable. It's finished on the PC and we're putting the finishing touches to the Amiga version.

The graphics are great and it's not what you'd expect from a film licence. It actually takes the form of a point and click system."

"We also have Humans 1 and 2 coming out. Nasca Racing is another one and also American Gladiators. We're expanding our



Kelly Sumner happily awaits the release of Elite 2 from Gametek.



Getting to know the locals once you've docked.

some time ago that they would concentrate their expertise in the console market and allow us to sub-license their releases and that included everything except Frontier. Then two or three weeks ago Konami decided that, since we had the rest of their licences, it



Extensive system data is provided.



The Bat belt has all mod cons fitted.

development team and a guy from DMA Design (the people behind Lemmings and Walker) is joining us. So, we'll be cranking up the number of products for the Amiga market."

The Universe of Elite 2



Buzz the city, but no weapons to be fired illegally.

It is a rare and sad day when words fail me (Oh really? ED), but to try to explain the achievement that is Elite 2 is almost as hard a task as creating the game must have been.

Nearly a decade ago, the original took the world by storm. It must be the only home computer game that old about which people still have serious conversations. Five years ago David Braben, Elite's creator, started developing the sequel and now, a year after its original release date, Elite 2 has arrived.

For those who know Elite, I will allay your

fears now. Elite 2 really does exist (I know from all the hype and conflicting press coverage that some have started to lose faith). More importantly, you will not be disappointed.

The game is, in many ways similar to the original. It is a space trading game where you ship merchandise between star systems, flying through brilliant vector graphics and docking in space stations, landing on moons and skimming planet surfaces. In addition, there are missions, ranging from parcel deliveries to assassinations, which you can complete. There are eighteen types of ship in the game and loads of ship improvements to drool over.

There are 100,000,000 planets in Frontier (a few more than the 2000 in the original Elite) and our galaxy is mapped out in perfect detail.

**in space no-one
can hear you scream**

The sound is minimal, but as they say, "in space no-one can hear you scream" and constant tunes would destroy the ambience of the game.

The real strong point of Elite 2 is the gameplay. The star maps are huge and intricate almost beyond belief and the control of the ship is easy to master. Add to this the gorgeous user interface for trade and other elements when you are docked (the graphics are very well done and reminded me somewhat of those of Dune).

The trade, missions and manual and automatic spaceflight (involving dogfights, although I was shocked when attacked on only my second flight out) taking place in such a vast playing area all contribute to what must be the most amazing space simulation yet created. It's easy to understand why Kelly



I recognize this place.

Sumner believes Elite 2 will be enjoyed by people for years to come.

With the price tag of a mere £29.99, when Elite 2 hits the streets, I predict it holding the top spot in the charts for an unbelievably long time. Only a massive amount of time playing the game would allow a fair review and the period I was able to use it at Gametek's offices was only enough to support this preview impression. I'm afraid fans will have to wait a little longer until the review copy manages to break free from Gametek's safe.



See anything you fancy, sir?



Space, the final Frontier (Well, somebody was going to have to make the joke, weren't they?)



Docking to the sound of classical music (overtures of 2001).

cd 32

Kelly was the man who actually named Commodore's new machine, the Amiga CD 32. The explanation behind the name was apparently that he thought it said exactly what it was; on his own admission it's not the most exciting of names, it just tells it like it is.

"I spent the best part of my last year at Commodore working on the Amiga CD 32. A lot of people put their ideas into the machine and I don't think anyone can claim it to be their idea, but a new CD machine was always on the cards after the CDTV. The CDTV was an attempt to create a market and that costs an awful lot of money, but the CD 32 is simply the best games console out there. There is evidently already a market for

games machines and this one is technically the most advanced. It's as simple as that. I just wish it could have been out a year earlier."

"Obviously though, I would like to support the new machine. I think Commodore deserve the support from publishers and we will have some games out within weeks and certainly before Christmas. I think Commodore need the support, not because I used to work for them, but because we need someone strong in the CD market. At the moment, there's nothing worth it really out there."

"Initially, of course, it will be shovel work of converting games, but we'll want to be developing for it as soon as possible." And there you have it. The best machine and the best game in the words of the man who knows. Thank you, Kelly, and as you said, "That wasn't too painful at all." **a**

BLADE OF DESTINY



Out on the town and having a time of it.



The party's ready to head out and kick up some hack and slash.

REALMS OF ARKANIA

Just lately US Gold are finding some real blockbuster RPGs that are writing new chapters in programming techniques and broadening our enjoyment of the genre no end. I have especially in mind the stonkingly good Legend Of Valour which had me drooling for days on end and, of course, the fabulous LucasArts Indie and Monkey yarns which defy the imagination in scripting and graphics. What have they done now? Blade Of Destiny is another mighty episode of sumptuous

are given tips who in your party is best suited for the job at hand. The advanced level offers you complete control over your characters' statistics, skill and magic, allowing you to custom tailor your heroes. Of course, you get full access to the stats that role players love to collect and as your characters progress through the game, you may fine tune their personal skills to your own tastes.

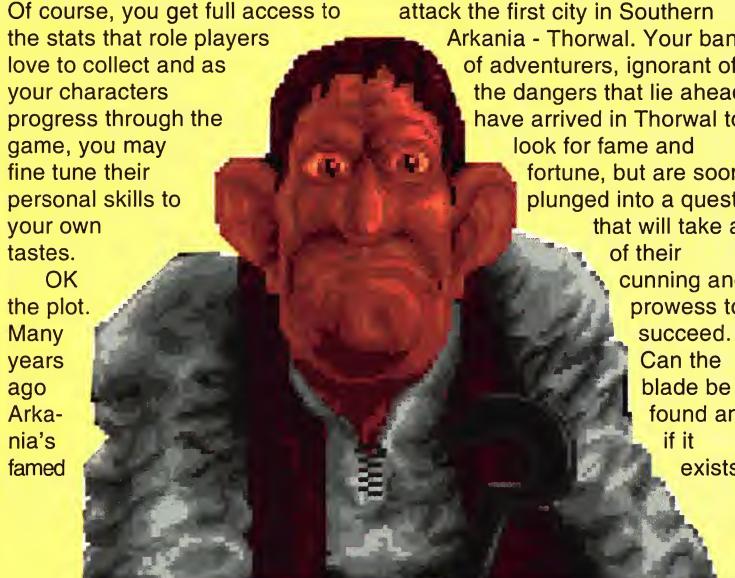
OK the plot. Many years ago Arkania's famed

graphics, stirring music of epic proportions and first rate monster bashing of the very highest quality. Created in Germany under a role playing system called Das Schwarze Auge (The Black Eye), Attic Software have produced a game that thoughtfully caters for novices and experts alike and is one of those rare breed of games that has just about everything you could wish for, including 7 disks!

On the novice level, your party is already created (there is, however, a facility on Novice to create your own party if you wish) and throughout the adventure, you



The Generation Game - very character building



We've come to the conclusion that he doesn't seem to like us much!

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would defeat the fiercest foe. He never returned. Does the legendary weapon exist?

Amassing on the Steppes of Orcland, thousands of the black furred warriors are preparing to attack the first city in Southern Arkania - Thorwal. Your band of adventurers, ignorant of the dangers that lie ahead, have arrived in Thorwal to look for fame and fortune, but are soon plunged into a quest that will take all of their cunning and prowess to succeed. Can the blade be found and if it exists,

Full combat routines are available, as is computer-aided combat, which is a piece of cake provided that you position your characters in the right places.

There is a lot of disk accessing, although, again thoughtfully, the programmers have indicated which disks to leave in the drives for reduced swapping. Loads of monsters, many many subquests and all in all a jolly romp through hack and slash land.

There are so many options to

REALMS OF ARKANIA		HARRIER THRUST	
DEITY	RANJU	CR	1/11
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I think we could do with a few more weapons here.

hand in Blade that it would need the review to list them, but take it from me, you would not find a better produced and directed piece of software adventuring anywhere - apart from Legend Of Valour that is!

VERDICT

Graphics:	94%
Sound:	95%
Game Play:	97%
Decision:	98%

NIPPON SAFES INC

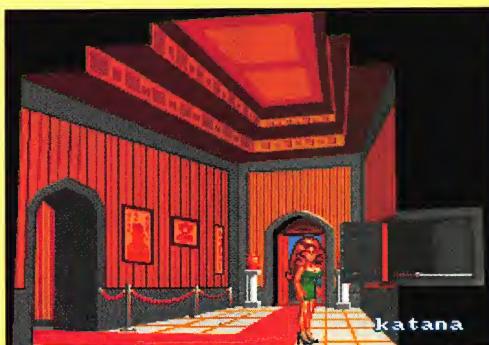
Dynabyte £24.95

Introducing a new concept that Dynabyte calls Parrallax viewing, Nippon lets you take one of the three characters in the game and eventually meet the other two somewhere in the story. This will lead you to solving some of the puzzles that without the other two's help would be impossible. Weird? Confused? Ha! Even more confusing is that the game is set in Japan in the fictional city of Tyoko but Dynabyte are Italian!

Anyway, the game is a graphic adventure that uses a very modern art style that has a refreshing originality to it to depict the goings on in one of the most disreputable parts of the metropolis. The three characters, Doug Nuts, the crafty techno thief, Dino Faoli, a punch drunk former boxer, and Donna Fatale, a sleazy night club dancer, all have a part to play in solving the mystery. All three parts share many of the same locations, but the aims and puzzles for each are different.



You don't have to cry all the way there to crack open that bank!



Only the sword to get and you're won!!

To find out which of the three you are to play, you answer a series of questions and your responses are logged as coded symbols and after the final answer they disappear to reveal your role. The intention here is to try and match the character with your own personality. Hmm.

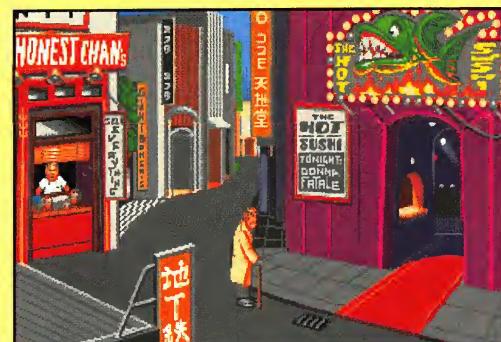
With so many testing puzzles to solve, I had my doubts about the mouse only control method, as there are only four icons: open/close, examine, take and talk and a graphic list of your inventory. So most of the time you are trying to solve a puzzle that requires a large number of actions due to the limited interface, rather than just picking one action from a list of many. This is aided by an intelligent interface that always assumes you want to do the thing that you want to do, instead of something entirely stupid, like eating the key!

There are some very witty lines, some very funny escapades and a lot of devious puzzles in a graphic adventure that stands out for its difference.

Nippon Safes isn't a classic in the mould of,



Oh no! You'd better get a move on. It's the cops again!



Hot (!) Sushi to go, please!

say, Monkey Island, but I bet it will have a cult following because it is so original.

VERDICT

Graphics:	93%
Sound:	87%
Game Play:	96%
Decision:	90%

AV8B Harrier Assault



Up on the flight deck

This is essentially two games in one. You get to pilot a Harrier jump jet in the midst of a Middle Eastern conflict and while you're at it, take over as task force commander in a full simulation of an amphibious landing operation by the US Marines. It is almost the perfect answer for those armchair Generals - go on, plan the campaign and then go out and see for yourself what it's like on the front line!

To win the game, you need to play both roles to some extent, but if you like air sims, you'll probably want to concentrate on the pilots' job, whilst a war gamer would probably stick to the tactical command scenario.

The action takes place aboard the USS Tarawa, the centre piece and flagship of the assault team. There are plenty of things for the



The command centre

novice to train into, as a lively training level is included, but beware, there is an awesome amount of techie info to take in at the higher levels. So, patience and understanding will reap a better reward.

For instance, the entire process of creating a battle plan is described in the Commander's manual, along with instructions on how to use the Tactical Amphibious Warfare Data System (TAWADS), the very sophisticated command and control system which creates the plan and passes orders to your forces.

My honest opinion is that on the Amiga the game runs too slowly. Ported from the PC, there

are just too many things going on at once to enable a decent processing speed to take place and maybe it would have been better to omit some of the more obscure routines.

That said, for any sim buff, this is overdose time and you should go and get a copy now and enter sim heaven.



At one with the birds

Graphics:	87%
Sound:	N/A
Game Play:	94%
Decision:	85%

VERDICT

Soccer Kid

Krisalis 1 Meg £29.99

I know all the pre-release versions were hyped (and reviewed, I notice) beyond belief. Can it really be that a platform game is this good?

Having asked the question, I find it hard to answer. Soccer Kid is a good game, very good in fact. Despite being a platformer, there are some good touches.

The ball is not merely used to fire at enemies, but to help you jump and to collect certain objects. Although Soccer Kid has many different moves, all of which are accessed from the joystick, it is simple to master them.



Get off my land!

However, I did find that sometimes the moves did work as quickly as I would like or the first time, but that was because some moves have complicated sequences needed to use them and an over sensitive joystick causes problems (I'm using the best excuse around here). Extreme (perhaps too extreme) accuracy is required.

The story is that some bizarre trophy collecting alien takes a fancy to the World Cup, attempts to steal it and ends up breaking it into five pieces which are scattered around the globe. The "football crazy Soccer Kid" decides to do his bit for the game and reconstitute the cup, except that everyone he meets hate football and try to stop him. The story then is mixture of originality and cliche... which is true of the game as a whole.

(And life itself? ED.)

The game has some good ideas; a sub-game is available to you if you collect all the football cards found around the levels. The graphics are very colourful

and the sprites move smoothly. Here comes the crunch though. If you've seen a lot of other platform games, you won't fail to notice elements 'borrowed' from other games. When Soccer Kid bounces high, for example, his movements are just too similar to a certain hedgehog's to be coincidental. The aim of the game is, despite being dressed up, identical to so many other games that the lack of originality pulls the game down somewhat.

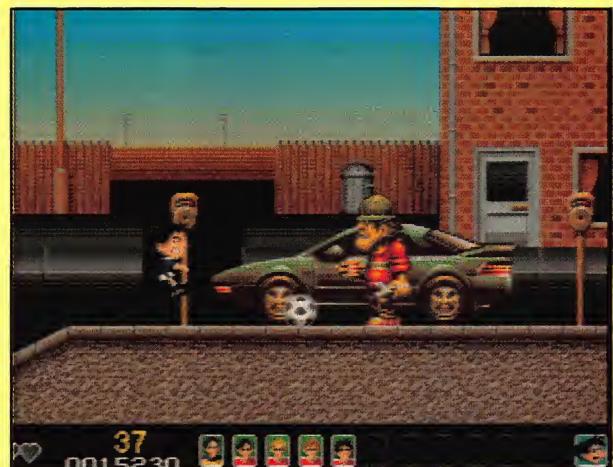
The music nearly, but not entirely, manages to be as colourful as the screen and is too repetitive.

Soccer Kid also has a couple of useless features. It is not hard drive installable, but will support up to three external drives. Great! Who on earth has three externals and why? Just for Soccer Kid? Also, you can customise Soccer Kid's strip to the colours of your

team. To me that sounds like a very stupid feature which only drooling football lunatics (never mind fanatics) would want. I guess it's supposed to be one of those 'nice touches', but it isn't. It's an attempt to provide some link within the game to football (since most of them are superficial, even the ball skills could equally be transformed into a different idea) and perhaps to pick up sales from fans of the real game.

So maybe Soccer Kid is a cash in on the upcoming World Cup. On the other hand, if it's a good cash in, why should anyone mind?

The bottom line is very simple. Soccer Kid is a damn good platform game and so it should be, since it uses all the best elements incorporated into any such game. If you like football and platform games, buy it. If you like either, have a look. For platform lovers though, Bubba'n'Stix from Core looks like shaping up into another excellent platformer with a great deal of humour. Until then, though, Soccer Kid is a good bet.



Didn't anyone ever tell him not to play with his ball in the street?

PREVIEW

Bubba'n'Stix

Core

After the mediocre attempt of Blob, Core are set back on track with Bubba'n'Stix. From the preview, it looks like being an excellent platform game which is full of humour and also needs a little thought in order to find a way to progress through each level. The game concerns Elvis, a delivery man kidnapped by aliens (obviously flavour of the month, these little blighters) escaping with the help of his new friend, a being in the shape of a stick. Together they make a great team and Elvis uses his friend in many amusing ways. The graphics are excellent, as is the



Bubba: Elvis meets some aliens (you read it here first!)

music and if the gameplay is of as high a standard throughout as it is in the demo, then Core have got a real winner.



VERDICT

Graphics:	92%
Sound:	80%
Game Play:	93%
Decision:	86%

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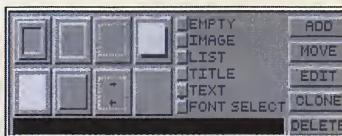
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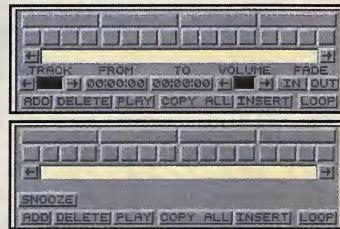


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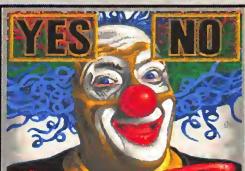
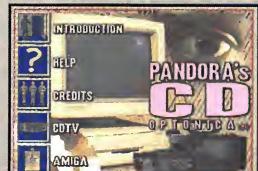
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Ishar 2

A1200 Version Simaris £29.99

Recently released for the lower end Amigas, Ishar 2 is now available for the A1200. The game is a typical adventure in the now 'standard' 1st person 3D mould.

The gameplay is reasonable, although it allows very little deviation from the set path if you



Some of the graphics are well drawn and colourful are going to finish it. That said, a nice twist is the way in which you acquire your band of merry men.

Unlike the usual style of creating your company, you must recruit people, taking into account not only their class and level, but also their alignment (to avoid arguments within the party, which can eventually lead to a blood bath and your people killing each other off - not conducive to the game's completion!).

The graphics can be quite attractive and the sounds acceptable. I did notice, however, a few instances where the game had not been entirely translated (it is of French origin). Ishar 2 is a respectable and playable attempt, but could have been more finely polished with a little more care.



GOOD OLD DAZE

Daze Marketing, the people responsible for distributing such quality games as The Patrician in this country, have announced their end of year's contributions to the entertainment scene.

They are releasing six games on their budget label, Games Worth Playing. Each of them was a great success on their original release and must be tempting to anyone who doesn't already own them.

Storm Master is a strategy game with 3D combat screen options. The graphics



Care for a bomb?

VERDICT

Graphics:	84%
Sound:	82%
Game Play:	76%
Decision:	80%

Thomas the Tank Engine 2

Alternative £12.99

It might seem strange to some to claim that very few computer games for children exist, but it is true. It is only at a certain age that you can manage the coordination necessary to master complex moves. Younger children, who are as enthralled with computers as their older siblings, are left with few possibilities, although these days some excellent edutainment is emerging, as you

can read often in AUI. However, Alternative Software have released a great game that makes no pretensions to



education and which can fill the need for straight up games.

Thomas 2 has appealing subject and allows a two player option so that parent can play against child. Quality time! It does help the child (and perhaps the parent!) become more accustomed to using the computer. The gameplay is a race, with various characters available and the only complaint is that it isn't that

Last one home's an Ivor!

easy. It is simple to control and four to eight year olds should enjoy it, but the races are not easily completed.

Marks have been awarded bearing in mind the target age.

VERDICT

Graphics:	84%
Sound:	82%
Game Play:	75%
Decision:	81%



A hut in the middle of the woods, but not made of gingerbread!

All of these games retail for £9.99, but Daze are offering an even more staggering deal. If you buy directly from them, each game will only cost a minute £2.99. We were taken aback when we read it.

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I think the word 'Beast' is the one we should concentrate on here, because the hero of this game bears a marked resemblance to the sprite from Psygnosis's Shadow of the Beast 2. Indeed, the whole game has the same feel.

This is not a serious complaint though, as I enjoyed all three of the Beast installments (even if number two was ridiculously difficult).

The guiding light will make you master of beasts.

Granslam £19.99

including your health statistics. Nothing great so far, but unlike other games, this menu and the options can be left down while the game continues. You can fight (and sometimes have to) with, say, the health bar down and back off if you see you are getting too battered.



Come on then!

Beastlord is a blend of arcade beat 'em up style and adventure. The plot sets you as the good guy (typically), hell bent on freeing the world from the dark powers that have descended. OK, 0 out of 10 for originality there, but the structure of the game does contain some strong points.

For instance, the character is operated with the joystick, allowing all the movements and fights to be controlled, but actions such as picking up, eating or spell casting are accessed from a menu which is brought down with the right mouse button. This menu contains everything,

Certain characters interact with you on a more than physical level and you must trade or talk with them. The speech you can input is somewhat limited, as the game has a minute vocabulary (those who remember games like The Hobbit on the Spectrum will know what sort of problems you will encounter). Although the key words are supplied, it is frustrating to keep getting the response "I don't understand". However, the girl who replies "Wibble!" when she didn't comprehend was quite amusing. Despite the problems kicked up with textual adventures, this element does add a bit more depth to the game.

fact that we like a save game option. Too few software houses realise that people don't particularly enjoy having to play the first levels again and again. It does get to be a pain, especially if it is one area that you need to practice.

In Beastlord, you have a set of tasks you must complete in order to progress and it is not an easy game. DO NOT, for example, hit ANYBODY in the village or they will never help you and you can kiss your chances goodbye.

The graphics are reasonably done. I particularly liked the way the enemy sprites collapsed after being dispatched. The sound is not excessive, but the Game Over sequence has a fine guitar tune that almost made you want to get killed.

Thank heavens also, because Granslam have cottoned on to the



"Well, well! Must we devine what to do?"

instead of an itchy trigger finger are not so obscure that you end up trying the ridiculous to achieve something. A famous pipe smoking detective, who lived a stone's throw (or two, if you're a bad shot) from AUI's offices, once noted that once all probable options had been exhausted, whatever remained, no matter how impossible, was the answer. Fine, but you cannot help but wonder sometimes how you were supposed to guess that 'eat the boot polish' or whatever was the solution.

Here, trading to get the knife in order to free the lepricorn from the net does seem like a pretty rational thing to do. If you try something silly, he says "What do I want with that? Help me" and if you can't "Oh. Go away!" All very reasonable in my, humble (I can hear some shouts of disbelief around me), opinion.

Beastlord, then, makes a nice addition to the genre. Not as linear as other such games and yet with enough arcade action to keep you on your toes, it combines punches with problems and cannot be condemned merely as a plagiarism of the Beast series. If you like scrolling adventures and beat 'em ups, Beastlord must be worth a look, especially since I can't believe many more games will be released at this price.

VERDICT

Graphics:	79%
Sound:	74%
Game Play:	82%
Decision:	81%

The problems which must be solved with a little thought,

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The Show Must Go On

Must it? At the European Computer Trade Show, our games reporter, David Taylor,

sloped off to the bar for days "to catch up on what's going down."



The heaving throng pick over the software publishers' offerings

The ECTS is the trade's chance to showcase its upcoming products to retailers and more importantly (!) to the nosy so-and-sos from the press. Although the ECTS started on a Sunday, quite a few of the companies' representatives (and a few journalists) were suffering that morning from the effects of the free bar at the ECTS party the night before.

None of this could stop the hype, however, as each stand vied to out do the next, by being louder and brighter (not what anybody wants on even the best Sunday morning, never mind that one!). Despite the innumerable games on show, it is hard to pick out the best. I wish this were because the standard was so high, but I fear that too many companies felt they had show all the games they were planning, regardless of their state.

I can hardly wait to hook up my computer to my stereo and convince my neighbours that a galactic war is taking place in my house.

Gremlin are readying the sequel to the Sonic beater, Zool. Zool 2 brings the little ninja alien back to our computers, together with his assistant, Zoot, who you can choose to play. It's good to see a female character on the screen and should please female games players (Yes, some of us DO know you exist), but the sprite could have been a little further removed from the stereotype of floozy computer characters. Still, it's at least a step in the right direction.

It is a strange release for Team 17, but one that he could only describe as "the most playable game here."

I can hardly wait to hook up my computer to my stereo and convince my neighbours that a galactic war is taking place in my house.

Gremlin also have K240, a sort of God sim, and, as if to please me, Disposable Hero - a shoot 'em up. D-Hero is fast blasting action with just about the best, pumping music to grace a game like this. I can hardly wait to



A Spitfire versus a MiG?

hook up my computer to my stereo and convince my neighbours that a galactic war is taking place in my house.

Microprose were showing Dogfight, a flight sim (surprise!) that allows you to pit World War 1 planes against modern aircraft and create the most unlikely aerial combat.

Ocean were displaying Jurassic Park, which I'll skip over since EVERYBODY has felt the hype, as well as Burning Rubber, their racing game.

Psynopsis, despite being tucked away downstairs, had more games in the pipeline than there were drunken journalists at the bar! From them, those which will inevitably make their mark were Dracula and Second Samurai, the much awaited sequel that looks like being a worthy successor to the first game.



Master, I shall not fail you this time.

They also had an original game called Innocent Until Caught, in which your character becomes more and more embroiled in a life of crime. It's been too long since a well done anti-hero emerged and this game could fill the gap.



I swear I'm innocent.



Renegade, like the rest of the world, are also preparing a few sequels. Uridium 2 did not really look so different from the original and Turrican 3 continued the series in the same vein as the other two. They also have a game called Elfmania, which is a very strange title for something that looks like a Streetfighter 2 clone (but with better graphics).



Take that, you swine.

Lastly, but by no means leastly, Team 17 were there in all their glory and glory it was, as they happily displayed Alien Breed 2 and Body Blows 2. I bumped into my predecessor, Ashley Cotter-Cairns, at the show, who could do nothing but rave about their game Qwak. It is a strange release for Team 17, but one that he could only describe as "the most playable game here." What more could I say?

There were hundreds of other games at the ECTS, some good, some awful, but with so many releases in the next few months, discerning Amiga games players (who read discerning games reviews) have great things to look forward to. **a**

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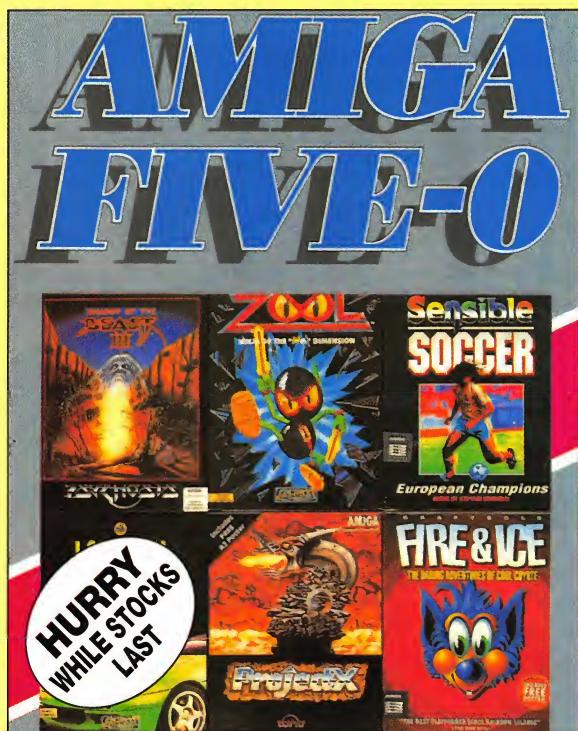
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Programming TIPS

This month Paul Overaa offers some help for those budding 68k coders.

People often ask how they can get started with 68000 assembler coding on the Amiga and this month I thought I'd spell out a few ground rules to minimise the potential snags. First and foremost however it's important to be aware that the 680x0 chips used in the Amiga, have instruction sets that are quite limited and there is nothing inherently complex about their operations. Each instruction carries out some elementary task, perhaps adding two values together or copying the contents of one memory location to another.

Unfortunately, and despite this underlying simplicity, there is no doubt that tackling assembly language on the Amiga is not an easy task because so much of the Amiga's environment itself is complex. Before you can comfortably write real Amiga assembler code to do a particular job it's necessary to know enough about the operating system, and its library arrangements, to work out what your assembler code should be doing.

Learning about these Amiga facilities turns out to be a big challenge simply because there is so much to understand. There is no easy road... you've just got to sit down and work at it and, even with the right documentation, it takes ages! Now this doesn't mean that you bury yourself in the Addison Wesley RKM manuals for a couple of years to eventually surface as an Amiga-enlightened coder. Far from it - the best approach is get stuck in and learn as you go along.

Specific

There is however absolutely no point struggling with Amiga specific issues until you have some basic ideas of what 68k coding is all about and your initial priority should therefore be to get a reasonable

understanding of a few common 68k instructions (such as the move instructions which are used to copy data between registers and memory).

You should also aim to eliminate as many of the Amiga specific problems as possible in the early days and you can do this by writing general, as opposed to Amiga-specific, example code. Non-Amiga specific Amiga coding? Sounds like a contradiction in terms until you remember that many small test programs will contain nothing in the way of Amiga-specific at all.

The following example, for instance, though it contains just two instructions, will happily run from a CLI/Shell window and load register d1 with the value \$20 hex...

```
start: move.l #$20,d1
rts
```

Not earth shattering by any stretch of the imagination but if this code is assembled into executable code it will run although you won't see any visible output! What you can do however is execute these types of beginners programs (examples of which can be found in all introductory 680x0 programming books) using a debugger. Devpac users for instance can assemble such test programs and run them using the MonAm debugger - and with MonAm's help you'll be able to see the effects of various microprocessor instructions as they are executed. Similarly short test programs will enable you'll be able to experiment with things like program loops, decision tests and so on.

Now this may not seem like real Amiga coding and to be honest it isn't. But it's a useful initial stage because it lets you play around with 68k instructions whilst avoiding the Amiga specific nasties that produce pitfalls in the early days. Once you've got a few weeks of practice under your belt and are happy with moving data, calling subroutines,

making decision tests, and perhaps some understanding of parameter passing issues (ways in which information or data can be passed to, or from, a subroutine or function) then you ought to be ready for the next stage. Might this involve Intuition and Amiga graphics? No chance, you've got a long way to go before they appear.

I reckon the best next step is to concentrate on writing some CLI/Shell based Amiga programs that actually use the CLI/Shell window as output. These will doubtless be a little more involved than your early efforts but, as Amiga programs go, they will still be relatively simple.

In order to send a message back to the CLI/Shell window that started the program you need to identify what's known as the standard output handle (known conventionally as _stdout). It's not a difficult job and all a program needs to do is open the DOS library, and then make a call to the DOS Output() function.

You may find that the standard Amiga startup-code (which will be provided with your assembler) will actually open the DOS library for

you but if not don't despair - opening the DOS library is no different to opening any other runtime library. Once a _stdout handle is available you can use another DOS call, Write(), to send data back to the CLI/Shell.

Figure 1 gives some brief details of the two DOS calls needed...

Opening libraries and making library function calls is easy once you've seen it done once (if you are stuck for details get hold of a copy of the *AUI Nov 92 issue Programming Tips*). Firstly, just try setting up simple static text messages, such as...

dc.b 'this is just a test'

and printing them to _stdout. Then try slightly more complicated programs which involve loops etc. Within a short space of time you should find that you've mastered the fundamentals of CLI/Shell output and, since you'll also have some library call experience under your belt, you should be ready to take the next step forward. What's it going to be? - find out next month!

Function Name:	Output()
Description:	Identify a programs initial output file handle
Call Format:	file_handle = Output()
Registers:	d0
Arguments:	None
Return Value:	file_handle - the programs initial output file handle
Function Name:	Write()
Description:	Write data to a file
Call Format:	length_written = Write(file, buffer_p, data_length)
Registers:	D0 D1 D2 D3
Arguments:	file - file handle buffer_p - pointer to buffer holding the data data_length - length of the data
Return Value:	length_written - number of bytes actually written
Notes:	A length_written value of -1 will indicate an error

Two DOS calls that can be very useful during early 68k coding days.

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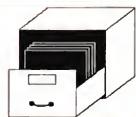
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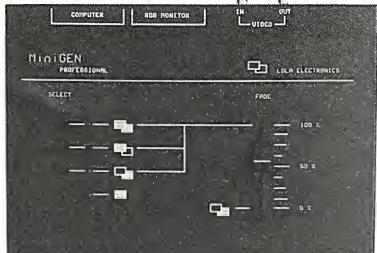
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This month Paul Overaa starts a new mini-series aimed at providing some hints and tips about popular ARexx-based Amiga software.

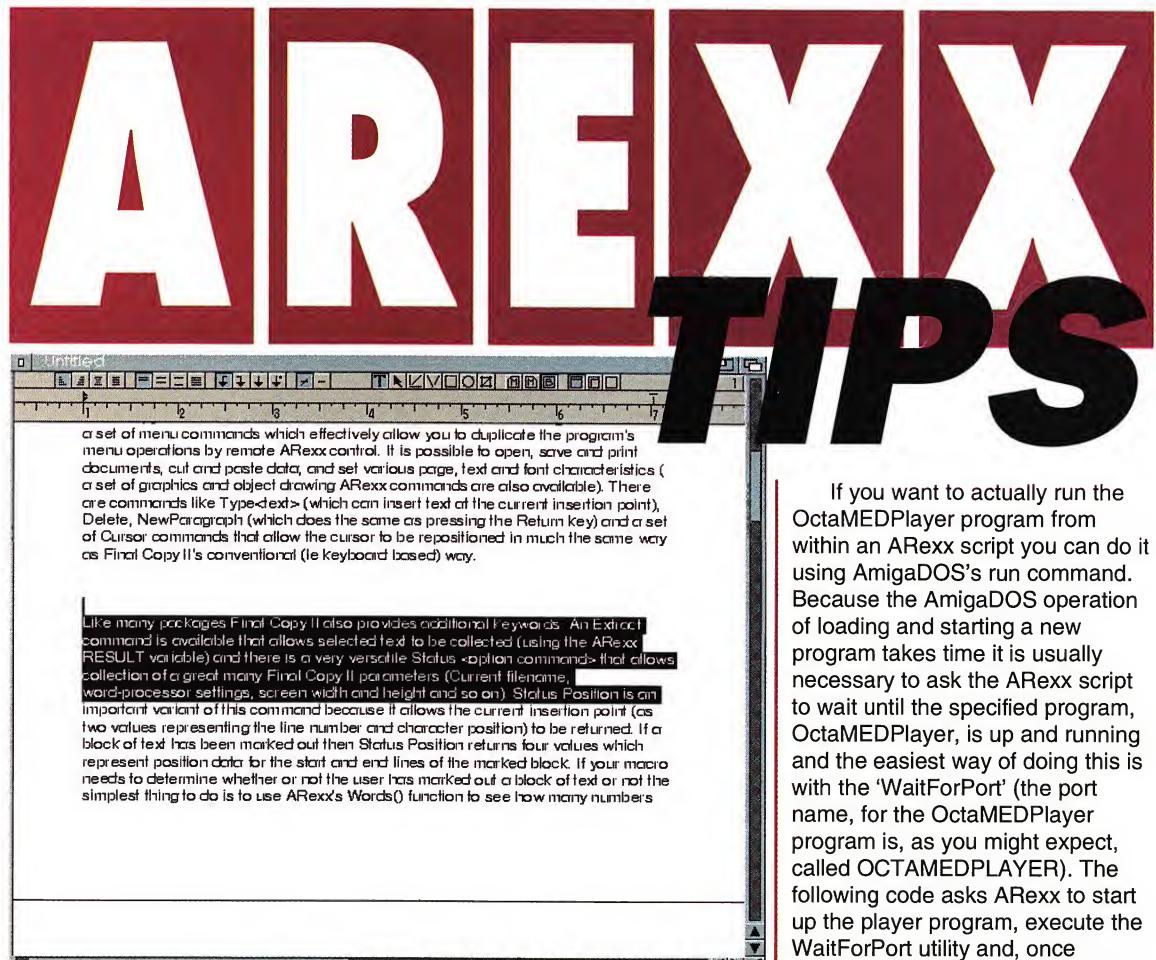
final copy II

Le's face it. Compared to PC machines the Amiga doesn't exactly have much to shout about as far as real heavyweight word-processing software goes. But it does however have a number of packages which are more than adequate for most jobs and one recently updated offering, Softwood's Final Copy II, is actually proving to be very good indeed. One of the reasons is the newly added features such as PostScript font support (which can be used not just with PostScript devices but with any graphics printer). Another is the continuing support for ARexx and that's an area that is well worth learning about since it can make Final Copy II infinitely more powerful.

Final Copy II's ARexx instructions fall into a number of discrete categories. There is a set of menu commands which effectively allow you to duplicate the program's menu operations by remote ARexx control. It is possible to open, save and print documents, cut and paste data, and set various page, text and font characteristics (a set of graphics and object drawing ARexx commands are also available). There are commands like Type-<text> (which can insert text at the current insertion point), Delete, NewParagraph (which does the same as pressing the Return key) and a set of Cursor commands that allow the cursor to be repositioned in much the same way as Final Copy II's conventional (keyboard based) way.

keywords

Like many packages Final Copy II also provides additional keywords.



Final Copy II has a very powerful ARexx command set

An Extract command is available that allows selected text to be collected (using the ARexx RESULT variable) and there is a very versatile Status <option command> that allows collection of a great many Final Copy II parameters (current filename, word-processor settings, screen width and height and so on). Status Position is an important variant of this command because it allows the current insertion point (as two values representing the line number and character position) to be returned. If a block of text has been marked out then Status Position returns four values which represent position data for the start and end lines of the marked block. If your macro needs to determine whether or not the user has marked out a block of text or not the simplest thing to do is to use ARexx's Words() function to see how many numbers were placed into the RESULTS variable. You could, for example, use this type of code arrangements...

```
options results
status position
if Words(result)=2 then
do
/* do 'no blocked' marked stuff */
end
else
do
/* do 'blocked marked' stuff */
end
```

There is one very important ARexx command, called MoveTo,

that unfortunately did not find its way into the Final Copy manual. It takes the form MoveTo <line position> and it allows you to explicitly set the current text insertion point. It does incidentally also work with Final Copy II's ShiftDown and ShiftUp commands so it can also be used to remotely select ranges of text!

octamed
professional

Since a brand new version of OctaMED Pro (version 5) has recently hit the streets, it seems only fitting this month to also mention the freely distributable OctaMEDPlayer program which comes as part of the package. With this program the ARexx interface has only a small set of commands, but it is still sufficient for an awful lot of music and multi-media control applications. Here are details of the currently implemented commands...

PLAY	Plays the current module.
CONT	Continue playing.
STOP	Stop Playing.
LOADMOD <filename>	Load a module.
SONGNUM <song number>	Select a multi-song module song number.
GETSONGS	Returns the number of songs in current module.
QUIT	Close down the OctaMEDPlayer program.

If you want to actually run the OctaMEDPlayer program from within an ARexx script you can do it using AmigaDOS's run command. Because the AmigaDOS operation of loading and starting a new program takes time it is usually necessary to ask the ARexx script to wait until the specified program, OctaMEDPlayer, is up and running and the easiest way of doing this is with the 'WaitForPort' (the port name, for the OctaMEDPlayer program is, as you might expect, called OCTAMEDPLAYER). The following code asks ARexx to start up the player program, execute the WaitForPort utility and, once OctaMEDPlayer is active, lock into its communications port.

```
address command 'run
OctaMEDPlayer'
address command 'WaitForPort
OCTAMEDPLAYER'
address 'OCTAMEDPLAYER' /* speak to player */
```

From this point on any commands which are not valid ARexx statements would get transmitted to the OctaMEDPlayer program. If for example we wanted to load an OctaMED module called 'testsong' from drive d0: we'd issue instruction...

```
'loadmod d0:testsong'
```

and this could then be played simply by issuing a 'Play' instruction. The OctaMEDPlayer program is, incidentally, extremely easy to learn how to control (because of its small ARexx instruction set). If you are new to ARexx, and fancy playing around with some example scripts that actually do something useful, then OctaMED provides a good place to start. The commands shown above are, for instance, quite sufficient to enable you to create a script that plays background music for 'livening up' text readers etc. 

Anyway that's about it for this month. In the next instalment, we'll take a look at SuperJAM and the John Veldhuis Virus Checker program which are two more offerings that can be controlled via ARexx.



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The marks awarded to each PD disk are based purely upon its own merits and, of course, our personal views. Value for money and reliability are also taken into account as well as features and quality of the software.

Compatibility

The PD disks reviewed in this issue were tested on an A500 with Kickstart 1.3. Please check with your PD supplier that the disks you are ordering are compatible with your Amiga. Amiga Plus, 600, or 1200 owners should be aware that roughly half of the software in the public domain will not work with Kickstart 2 or 3. Always ask first.

Gideon Overhead hunts out the best and the most interesting PD around.

Stakeout Akira



Disk 2695
17 Bit

Anybody who has seen an Akira cartoon will know that they are known for extreme violence and generous amounts of blood-letting. (Just the sort of thing that Ashley Cotter-Cairns revels in!) These hand drawn pictures are not as sick as some of the cartoons but there are still one or two nasty piccies. They are all nice and crisp from being in Hi-Res 16 colours. If mindless violence turns you on...

7/10

Slide
Show



Blitz Basic Games



Disk G336
NBS

9/10

This disk contains two games that demonstrate what can be done with Blitz Basic 2. The results are very impressive indeed. The first is Defender. This version is almost identical to the BBC B original (Wow!). Even the keys are the same right down to tapping space for reverse.

The second game is called Zombie Apocalypse and is similar to Operation Wolf in play. This means you kill everything on the screen via a cross hair controlled with the mouse.

PMC Alpha & Omega

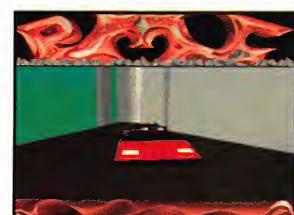
Disk DE070
Magnetic Fields

This three disk demo contains no new effects but it is so well executed that it holds your attention right until the end. It is a vector show which starts off in an underground train tunnel. You see the train from several angles and travel through several stations before arriving outside in the open. We then leave the train for a short animated sequence starring Michael Jackson. This seems a little out of place among all the vectors but is still fun to



8/10

watch. (Though perhaps these days it shouldn't be shown to young boys...) We then rejoin the vector show for a car chase through the streets of Gotham city. The car then for some bizarre reason changes into a jet fighter and flies in and out of the buildings before landing on an aircraft carrier. The vectors may not be the smoothest I have seen but the demo goes on for a long time which alone is quite impressive.



GOLF

Disk GA037
Magnetic Fields

I am not a programmer, but I don't think I would be incorrect to say that programming a golf game would be a hard assignment. I expect the most difficult task would be getting the ball to act like a real golf ball when it is hit. This Amiga game doesn't entirely succeed I'm afraid.

The courses are viewed from above and there are 18 of them altogether. The control is very easy. There is an arrow on screen which points at your ball, you can move this around to point to the direction you want to hit the ball. Pressing space activates the power selector which rises and falls. You press space again when it shows the amount of power you want.

If you have an Amiga 3000 or a machine with a fast processor, this meter will go haywire and then the selection becomes random. (Which could make it rather fun for a change.) The last selector is for left or right fade, after this the ball is sent on its way.

That is really all that there is to the game. It won't allow you to chip your ball over trees which is rather silly; it simply bounces off them. It is also very difficult to get round the courses in level par. My best score after all 18 holes was 49 over par! (That comes of playing with your father. ED) As a free golf game it is OK, but after about five holes you will have the sudden urge to watch paint dry.

6/10

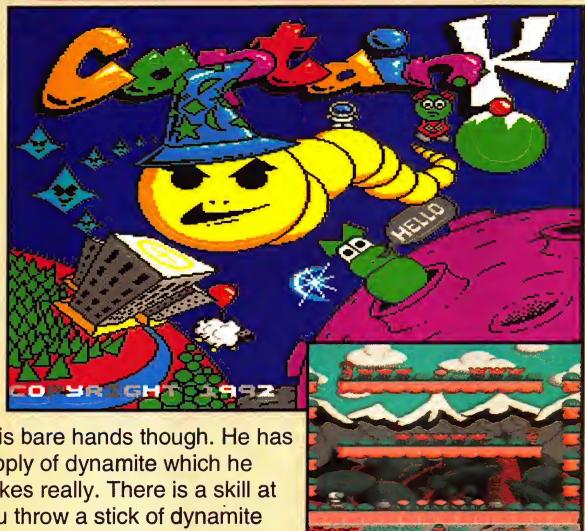


Disk CLG 30
NBS

This Licenceware platform game reminds me of Rick Dangerous, and surely must have been modelled from it. It contains a lot of cute graphics and neat little sound effects. You control Captain K who has the onerous task of saving the world which has just been invaded by aliens (What again? I hear you cry. Not another lot of boring aliens from outer space!).

He doesn't have to use his bare hands though. He has with him an inexhaustible supply of dynamite which he can lob at, well anybody he likes really. There is a skill at killing these aliens. When you throw a stick of dynamite there is a short delay before it explodes, this coupled with the fact that it bounces makes it a skill to be mastered. Captain K is a game well worth getting if you enjoyed Rick Dangerous and at £3.50 is a bargain.

Captain K



8/10

Stakeout

Serious Backgammon

Tower Software

Tower Software specialise in producing quality conversions of a range of card and board games. Backgammon is a board game which I have played many times and thoroughly enjoyed. For those of you who don't know how to play it, Backgammon is a two player game, the idea is to get your pieces home by moving them around the board. This is done by the use of two dice, the numbers thrown are the number of spaces you move.



It turns out that 25% of the game is skill, the remainder being decided on the dice throws. This game is extremely well programmed, with excellent on-line help menus.

The PD version costs £2.50, and gives you 5-10 minutes of game play. This is irritating because you are enjoying the game when suddenly a time up requester pops up, DOW!

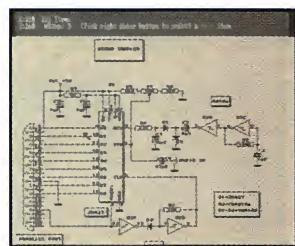
The full version is rather expensive at £20. Even though this game contains many more features than the other board games offered by Tower Software I still feel this price is a little too much. But I have found this game the most addictive by this company so far.

8/10

Disk MI005 Magnetic Fields

Troni-CAD is a program used to draw electronic circuits. It has a screen with a working area of 1200 X 900 pixels. You can choose from a range of symbols including Resistors, Capacitors, Diodes, and various logic gates. The program is very easy to use

and works well. There are various examples on disk, and they all look excellent in Hi-Res, and you can scroll around the page very speedily. This demo version has the saving function disabled but you are still allowed to print out your diagrams.



7/10

STRIKEBALL

Disk 2669 17 Bit



Strikeball is a two player only game and is a version of Baseball with a few rules changes. The game is viewed from overhead, and one player goes into bat, while the other player (surprise, surprise), is fielding/pitching.

There are three ways of pitching the ball, fast, medium, and slow. If the

batter manages to hit the ball, he automatically runs around all the bases and you cannot stop him. This is silly because all the fielder has to do is throw the ball to the fielder in front of the batter and he is out. Perhaps this will be rectified along with a one player option in StrikeBall 2 which should be out soon.



7/10

TIME RIFT

Disk CLG 28 NBS

This Licenceware game was programmed in Amos but you can't really tell. In fact, it's almost up to commercial standard. It's clear that the author has been influenced by several games. The first is Shadow Of The Beast because of the way the main character runs and the creatures which appear. It is also similar to Gods in the way that some of the objects move and look.

As you might have guessed, it is an arcade adventure and the object is to collect four time crystals to travel on to the next level of which there are four altogether. During your travels you will encounter various power up's for your weapons and, of course, those nasty creatures who want

to kill you. The graphics are well drawn and animated and my only gripe is that there wasn't any in-game music to listen to!



7/10

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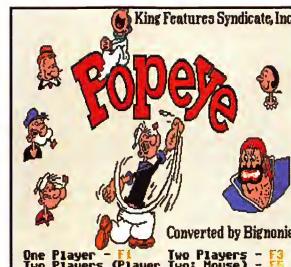
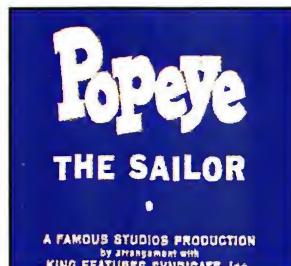
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Stakeout

The Real Popeye

Disk 2681
17 Bit

A few issues ago I reviewed Donkey Kong, converted to the Amiga from the Commodore 64. The same



9/10

programmers have now converted Popeye, and it's simply brilliant. This is not for the reason of how accurate the conversion was carried out, but for the simple fact that it is fun to play.

I had a ZX Spectrum I am afraid, and didn't experience the pleasure of owning a C64 so I have never seen the original version.

Popeye is a platform game, to complete a level you (Popeye) have to collect a number of items dropped by your sweetheart (Olive Oil). These can be hearts, help signs, or even musical notes. Cans of spinach can be found lying around, and when eaten, well you know what happens, you hear the Popeye jingle, and for a short time you are invincible. For this period you are able to punch Brutus, your rival, who has been roaming around the level trying to kill you.

The single drawback to all this excellent game play is that there are only four levels, then it loops round again. It is well worth getting just to see the preceding Popeye demo which contains the excellent Popeye theme.

At the title screen you are asked to vote for your favourite C64 game you would like to see converted to the Amiga. I would choose Mr. Do. Even though I have never seen it on the C64, if they could make it as fun to play as the arcade machine I would be very happy and I'm sure you would be too.

James Bond HyperBook

Believe it or not this year is the 30th anniversary of the James Bond movies. A dedicated fan has decided to put together three disks of information about one of the most successful series of motion pictures in the history of cinema. Every film is covered from Dr. No. to Licence To Kill.

**Disk E26-28
NBS**

Hyperbook is used to good effect and each film has its own section. This features a list of the cast and credits, a short synopsis, behind the scenes info, and a colour picture of

a scene from the film. There are over forty digitised pictures in low res HAM which are average quality. The information is very thorough and I am sure very accurate. For Bondage fans a must...

7/10



RIGHT WAY

**Disk RGA006
Roberta Smith**

Unless you speak German you won't be able to read the background story or the scroll text in the demo that accompanies this game. Most demos or games made in foreign countries are usually in English, but for some reason this isn't. (Why? We will ask ze questions!!)

The instructions however are quite easy to work out. The programmers have made a game similar to Lemmings. The object is to get a number of creatures (which look remarkably similar to those infuriatingly



suicidal rodents) home, or to point them the "Right Way". This is done by moving a series of sliders up and down until they make a pathway for the little beasts. This procedure can be tricky as not all the sliders move. Though the little beasts are somewhat alike, the game is sufficiently different from Lemmings to make it interesting and is very well programmed.

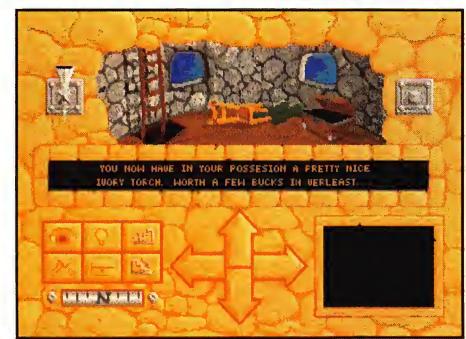
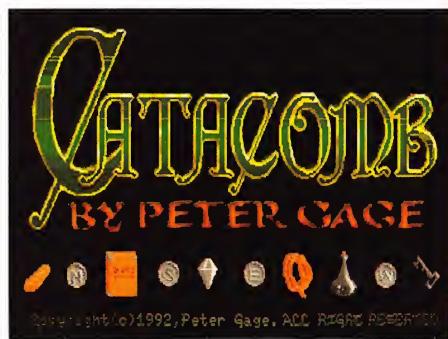
Catacombs

**Disk GA185
Magnetic Fields**

I do enjoy a good adventure game. Preferably one with lots of locations, plenty of monsters and easy puzzles to solve. This game has all these and the only criticism I have is the control system.

There is a limit to what you can do at any location due to there only being 6 icons for you to click on, these being look, think, use, open, and climb up and down. What you end up doing at every location is clicking on all of these until you get a result. But, you will not always complete the game like this as you will need to use certain objects in certain places. There are many locations and you can easily get lost in the catacombs. There isn't a lot of sound, in fact, the only samples are when you press an icon. This sounds like someone breathing (even though it probably isn't supposed to) and is strangely atmospheric – if you are into heavy breathing. And if you are don't call us, we'll call you.

6/10



REKO PRODUCTIONS

KLONDIKE DELUXE AGA

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PRESENTS

Klondike Deluxe AGA



Disk 2635 17 Bit

I had been waiting to review this program for a long time. The reason I haven't done so before is that we originally had an un-expanded A1200 in the office and this program needed a minimum of four megs to run. Now with loads of extra memory I could finally take a look at it.

Although it will run on a non AGA machine, it looks infinitely better on a A1200 or A4000. Apart from the four meg version which is optimised for the 68030 processor, there is a second version which is optimised for the 68040 and requires a massive 8.5 megs to run!

It is a very powerful chess program, probably the strongest on the Amiga, and the 68040 version stronger still. As well as being very intelligently programmed, it has a library of 11200 games and manoeuvres that it loads into RAM and can



consult. This is by far the best chess program I have seen and is a must buy for anybody with an AGA machine. Regardless of the machine you have the default screen resolution is

640 X 480 which is Hi-Res Lace. This means that if you are playing a long game a multisync monitor is not only recommended it's mandatory. Highly recommended both for

Disk G1060 KEW=II

If you mention the game Klondike to anyone the chances are they will call the police. If you then mention the game Klondike to a friend they will probably not have heard of it. If you then tell them it is essentially the game Patience they will know what you are talking about.

This version of Klondike is special because it uses the AGA chip set. The game is in Hi-res mode, and on every card is a picture of a fashion model. These ladies are not 80's or 90's fashion models, but very tasteful 50's ones. (Yes, old enough to be your Mum, so show it to Dad.)

The control method is very easy via the mouse although instead of dragging the cards across the screen you first click on the card and then click on where you want to put it. Everything works very well and it looks even better with a multisync monitor as there is even a option to switch to flicker free mode. The game comes on three disks and although it doesn't state how much memory you need in the documentation, I expect you will need at least three megs.

9/10

CONTACTS

for PD reviewed in this issue

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IF YOU... have created a MASTER-PIECE

and you would like it reviewed here or if you own a Public Domain company and want to contribute new and interesting PD, please don't hesitate to send it in. The address is:

**The PD Stakeout,
AUI,
48 George Street,
London W1H 5RF**

9/10

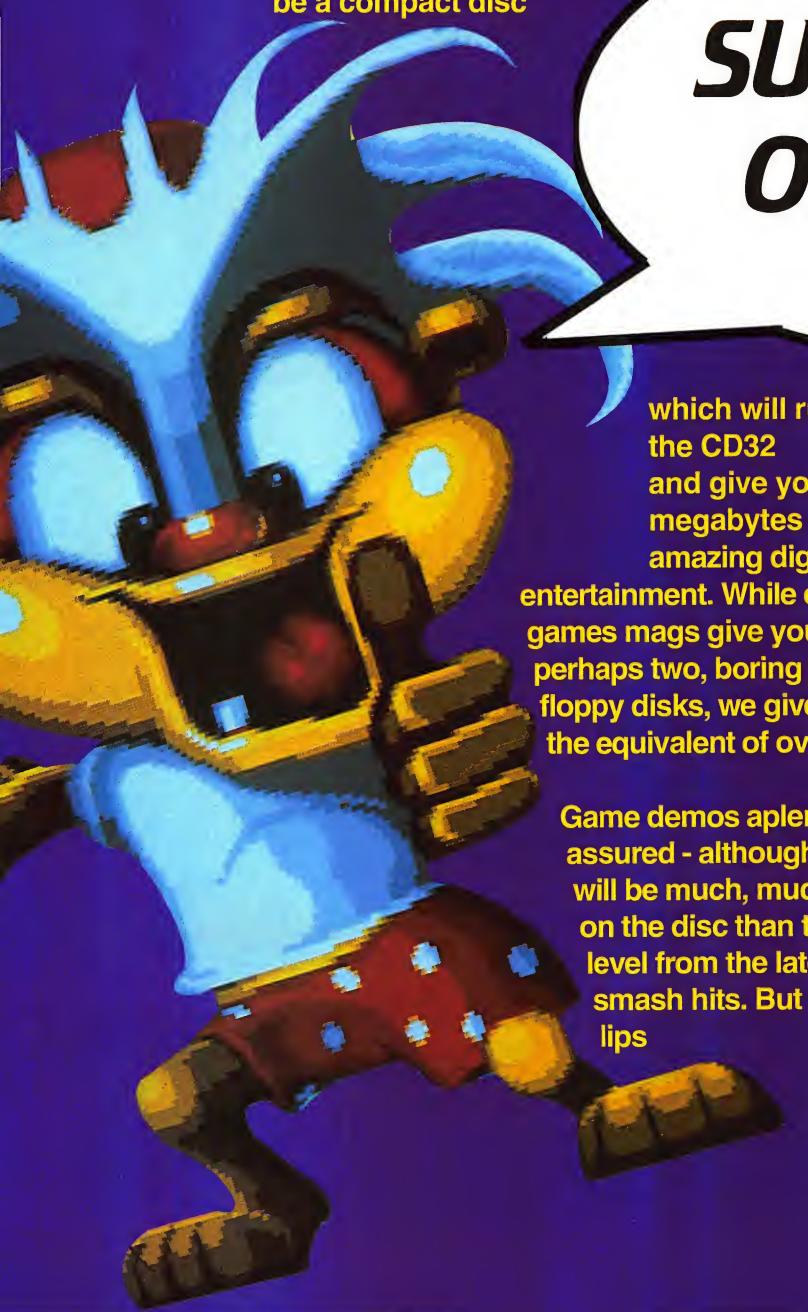
S

o this is it. Your FREE taster of Amiga CD! is almost over. There's only the preview of Oscar to entertain you, before you hit the cover and then, flop, the mag goes back into the box and you forget all about it.

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It is the result of an amazing new discovery, made in our top secret laboratories on the ISLES OF SCILLY. This chemical is unique, in that its effects are irreversible - and in that people affected by it metamorphosed into a popular more than somewhat potty snack.

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I'm sorry it had to be like this.
But those chemicals are
already at work - can you feel
your fingers starting to tingle
yet? - so you'd better fill in this
form, quick.

You know it makes sense. We'll even save you some money!
The subscription costs £34 per year and, at £3.50 per issue,to buy it every time would cost you £42.

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Yes please, I am hopelessly hooked on your fantastic magazine and I want to read it every month for the next year. Please bribe my postman to deliver copies of Amiga CD! starting from the most current issue at £34 per subscription. I enclose a cheque/postal order for £_____ payable to *Centurion Publications Limited*

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Expiry Date

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To: Amiga CD! Subscriptions Department, 17 Britton Street EC1M 5NQ

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Some neat tricks that the professionals use for Imagine 2.0 and the very latest on Real 3D. Bary McCarthy offers you another slice of his 3D tips.

a brush wraps

1 When you make brush maps, try to make them in Deluxe Paint AGA or Brilliance, rather than the earlier Deluxe Paint. This is because the early DPaint uses a non-24bit palette, so the maximum RGB level equates to 240 ($15 \times 16 = 240$). (Just take my word for it OK). This bug causes big problems for Filter wraps especially. If you have to stick with DPaint old, then adjust the 'Full Scale Value' box in the Brush Wrap requester of Imagine to read 240. This will make the highest value artificially 240, instead of 255 and make full filter totally transparent.



A 3d drip destined for the plug hole.

- 2 Altitude wraps have an undocumented feature. Grey RGB 128 (half way up the palette) equals flat (level with the surface of the object). This means that black RGB 0 equals indentations and white RGB 255 equals outdentations (well, you know what I mean).
- 3 Another vital element of altitude wrapping is that the size of the Y axis ONLY controls the height or depth of the bumps. This needs to be set to around 1% to 10% of the average X and Z sizes.
- 4 Repeat and mirror maps DON'T work with cylinder or sphere wrapping. This is a bug.

5 Objects with transparent holes - a short tutorial

OK, this is a bit of a bugger (*Am I allowed to say that Ed?*). I find that I need to do this on a surprising number of occasions (*what say 'bugger'? Consult a psychologist! Ed*). After a bit of experimentation with a simple two faced plane, I came up with this solution:

First of all, make two versions of your brush;

- 1 a pure white one, with holes made out of colour 0. Colour 0 is the first colour in the palette and is usually black by default. This is the colour that is used for genlocking.
- 2 your full colour brush also with colour 0 holes.

This is not difficult to do in Deluxe Paint or Brilliance. YES! Brilliance is finally here and it IS brilliant! It's faster and sad to say, better than Deluxe Paint. That's the first time I've ever been able to say that, since the release of Deluxe Paint I, all those years ago. Dan Silva (The programmer of DPaint I-III) must be as sick as a dog, to see how his program has been messed up over version IV. I'm sorry but it's true.

ANYWAY, now wrap your two brushes on your object, using the following settings;

- 1 use 'Filter wrap', click 'Genlock', click 'Inverse'
- 2 use 'Colour wrap', click 'Genlock'

Now set your object attributes as follows;

Colour RGB 255, Filter RGB 255.

NOTE: Look at problem 1- above and you may have to set 'Full Scale Value' in BOTH brush wrap requesters.

- 6 Shininess. Shininess is not like other attributes. It's a measure of reflectivity, like Reflect, but a DIFFUSE reflectivity. The light (or



What is this?



Strange ripples.

FIRST CUT PRODUCTIONS



It's a plug . . . lets look inside.

This is no ordinary plughole.



Even stranger ripples.

A 3d logo (it's not a plug!!) image) is reflected but also diffused, to make it less distinct. This is what you need to make most metals. That's really what it's designed for.

When Shininess is anything other than 0, two other attributes are stolen, to control aspects of shininess.
NOTE: You can't have transparent objects with shininess. Shininess is used to recreate metallic effects and you don't get transparent metals!

Index of Refraction now controls the amount of diffusion. 1.0 = Totally Diffused. Higher values make the reflections less diffuse and so, more and more focused.

NOTE: Index of Refraction is normally a measure of how much light is bent, when travelling through the object. In other words, how distorted things look through your transparent object. 1.0 = No bend and anything higher = more bend.

b other things!

1 'Make Soft' bug. Contrary to what the manual says, you can't pick edges and then use Make Soft, to smooth them out selectively. BUT, you can use 'Phong' shading in the Attributes requester (same as using 'Make Soft' all over) and THEN use 'Make Sharp' on selected edges. This is ESSENTIAL for logo construction.

Shininess is used to

recreate metallic effects

and you don't get

transparent metals! Filter

is now used to control

the 'tint' (It's a bit like

colourising but you need

to experiment with a

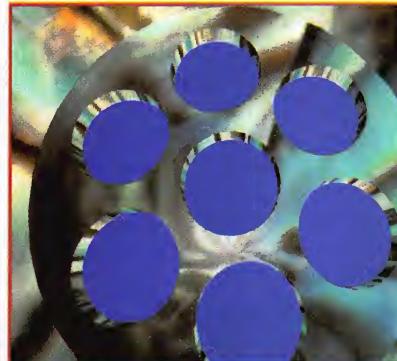
simple object to

understand it fully).

2 EDLE. Eh? Actually, this is one of the most important things in Imagine. It's in the 'Preferences' editor and it controls how much anti-aliasing Imagine uses in rendering. 0 = Best and 255 = No anti-aliasing. Rendering times are severely effected by this setting, so be careful. 30 ish is OK for stills and

100 is OK for hi-res animation frames in 24bit. The truth is that Imagine's anti-aliasing is cr*p! Totally re-written in version 3 though.

Right that's enough for now, more next time.



There's something very blue down there.

real 3d - bbs

R3d2 is currently at version 2.35 and if you haven't got this latest version, or you would like to get hold of materials and objects for r3d2, then try the Activa BBS on 010 31 20 697 1880.

If you are a registered owner of r3d, you should be able to log on automatically. If you have difficulties, simply leave a message for the Activa staff and they'll sort you out within about 48 hours. There's not a lot on the board at the moment, because it's so new but all the latest updates are there and it's a great way of influencing the development of the program and support thereof (?).

real 3d 2 - update

Version 2.40. Release date: November 1993.

-New Freeform Tools - twist and circular bend modifications - shrink wrapping functions - new creation functions: create torus, skin curve - many other new freeform modifications
- Font Tool - uses B-splines for best quality - automatic beveling with many bevel shape options - can be used with Pro Draw Compugraphic fonts - New Animation Features - time-line editor - frame based interface - easy to use key frame interface - Improved Camera Control - intuitive mouse based control - improved camera banking control in animations - Faster Rendering - B-spline shading twice as fast as v 2.35 - Better memory management, allowing more complex scenes, including improved polygonal databases - New fractal noise based mathematical textures - New fractal noise based animation methods. **a**

field report

slipping into virtual reality

BT's network planners and administrators are moving into virtual reality to manage and monitor their networks. The Systems Research Division at the BT labs in Martlesham has used software and hardware from VR specialist Dimension International to develop a three-dimensional desktop virtual world, which depicts a map of the UK with the layers of the BT network stacked on top of it.

The system will, they say, enable staff to see trouble spots developing instantly rather than have to interpret lists of numbers. They will be able to 'fly' over the network, with information presented to them as they approach nodes rather than seeing everything at once. Users will be able to penetrate each node and view a series of rooms. Each one will contain details about the node's performance. Bet you they sit there playing some smashing games...

optical disks for video phones

Re-writable optical disks could provide the ideal storage medium for Video Phone answering machines (VIPAMs), according to Specialized Computer Systems, one of Fujitsu's Middle East distributors based in Abu Dhabi, United Arab Emirates. The idea was the winning suggestion in a competition organised by Fujitsu at the launch of the M2511, a one-inch high 3½" rewritable optical disk drive.

SCS says that optical would present a better solution than video tape recorders by providing random access and being physically smaller.

SCS believe the ideal VIPAM will be based on a single chip microcomputer interfaced to 3½" optical disk drive. By using P-ROM (Partial ROM), the system utility software could be stored in ROM (prestamped on the disk) while the remainder of the disk would store the calls, indexed by time and date for quick and easy retrieval.

Other novel suggestions of future applications for 3½" optical disk drives in the competition included: marine navigation systems; storing charts and fixed data in ROM and plotted courses in RAM; multi-media will and testaments enabling people to record their dying wishes in voice, text and image; multi-media systems for estate agents proving data and images of property to be

Techn

Martin Witton researches the labs of the globe to find the ground breaking developments coming our way.



Consumer Electronic Show at Olympia '93, it was all TechnoWorld back in the '80s.

displayed on a portable computer.

That last one isn't so far away. The French company that produces the A-Video graphics device is planning to do just that in France. Well, not on a portable but putting video out through an Amiga. Oh, for a portable Amiga... But the fun (!) one has got to be that Will and Testament. I hereby bequeath to my ex-wife a large... and you video yourself blowing a substantial raspberry! (And for those who didn't know, the origin of that raspberry is cockney rhyming slang "Raspberry tart...")

customers, suppliers and other service agencies. EDI Business Team is the hub of BT's task force for the large-scale conversion of the UK to electronic trading. It will give customers a wide choice of products and expertise whilst setting the highest standards for reliability and service quality. Through EDI Business Team, BT say they will be working with the best sources of electronic trading expertise and the members will be trading all sectors of the UK economy including governmental and other service agencies.

steamrolling ahead

Ford are set to buy six million Motorola PowerPC microprocessors a year from 1996 for use in their Power Train Electronics engine management system. (And are we going to get the Motorola PowerPC chips for the Amiga?)

Motorola say this will enable the PowerPC chips sold to computer makers (CBM?) to be cheaper and

edi phone home!

BT have announced the formation of EDI Business Team, an alliance of the UK's leading providers of software, systems and management expertise in electronic trading.

Electronic Trading (also known as Electronic Data Interchange, EDI) is designed to help customers improve their performance by changing the way they do business within their trading communities of

FACTOID

Outside Santa Clara, California, Silicon Valley, Israel has the world's largest concentration of software developers - with 12,000 specialists working in about 150 companies. No wonder the Palestinians want the Israelis on their side. Oil plus orange juice and software!

World

that endorses the architecture jointly developed by Motorola, IBM and Apple.

The PowerPC chip sold for use in Ford's engine system is a derivative of the chip designed at the Somerset facility in Austin, Texas. Although exclusively owned by Motorola, the contract will be at the expense of the 88000 Reduced Instruction Set Computing set, also owned by Motorola, which Ford were previously interested in using – before their drive for the PowerPC!

And Commodore never even mentioned the 88000!

digital friday

If you are short of a 'girl' or 'man' Friday, or work from home, the Friday Personal/Office Receptionist might interest you. Bogen Communications of New Jersey have developed the Friday which performs the task of a personal assistant. When a call comes in it responds with your recorded general greeting and directs callers to choose one of eight mailboxes.

Four personal mailboxes can be programmed to take voice messages, forward urgent calls to another number or to a paging service. They notify you that a message is waiting or if you do not want to answer will let you know who is calling. Three others are for announcements only, providing information such as office hours, pricing or ordering instructions. The last mailbox is a data port for a fax machine or computer. A voice/data switch recognises the electric bleating of a fax modem and makes the connection automatically.

Friday also has an input for a radio or CD player for pre-recorded music to entertain callers on hold. There are about 200 icons on the LCD screen to enable you to program the receptionist as well as voice prompts. Friday sells for \$399.00 – about £270 – for use with one line phones and \$499.00 – £330 – for two lines.

compact polaroid

Polaroid have improved on the design of the camera for the infamous instant photography by developing the Captiva, which is more compact with a built-in storage compartment that lets

neural network hardware

Hitachi Europe have been working with researchers at Trinity College, Dublin, to develop a neural network processor that uses light to calculate – and they claim that the processor represents a breakthrough in pattern recognition. Previously most neural networks were software rather than hardware based and pattern identification systems have been of limited use because they need the images to be centred or altered to be recognisable.

The Dublin-Based group claims the optical processor can identify patterns if they are moving. It is built around an algorithm used because each computational stage of the equation can be broken down and turned into a process.

The optical processor itself is made up of 21 fingers of gallium arsenide, each representing an input neuron. Gallium arsenide was used because its properties can be altered by passing a current through it, just like a neuron.

The semiconductor can be made to reflect light, absorb light or emit light depending on the current, allowing the researchers to tune the device and help it learn.

Although the processor is four to five years away from commercial use the scientists say they have been surprised at the speed they have completed the first stage of the work, with trials already started on a working model.

you watch each photo as it develops. Wow!

The Captiva opens up accordion-style, and when closed it is around 44% smaller than conventional Polaroids (although it weighs the same). The photographs are rectangular (traditionally they were square at 4" x 4") but this, say Polaroid, gives the photographer the option of vertical or horizontal compositions. The Captiva comes with automatic focus, exposure, flash and aperture control. A patented range-finding system sends out an early flash to determine the subject's distance and brightness, then compares these data with 100 pre-programmed exposure scenarios to select the correct settings. Price \$119.00 - \$139.00. (£65 - £85).

The polaroid was the device that brought the joys of the techno world straight into the bedroom of the consumer...

business versus health

After years of ignoring health warnings with use of video displays and computer equipment, arising from the way it is used

VDU illness. Instead it proved counterproductive as electronic snooping caused fear and stress which led to more illness.

Further studies have shown that VDU workers have been more prone to illness since associated health problems have been publicised with tension cited as a leading offender.

At the University of Wisconsin-Madison a study is being carried out to document accurately how terminal-related illnesses can be attributed to the way a company manages staff.

However terminal manufacturers are complaining that their equipment is being unfairly blamed for the epidemic of illness and argue that if only the employers make sure the equipment was properly used the problem would disappear.

So it sounds that while you may be going to get ill from too much monitor gazing, if someone is checking up on you to see if you are going to get ill, you certainly will! Ah, this technoworld ain't a simple place.

ground control to general magic

Five biggies in the IT world have put their hands in the company pockets to invest in what has been dubbed 'the mother of all markets'. What the Californian start-up company General Magic with AT&T, Sony, Motorola, Philips and Matsushita have invested in is based on personal intelligent communicators (PICs) – handheld wireless communicators that can send and receive data and faxes over the cellular network. Users will be able to access information from their host systems, on-line databases and video services – from wherever they happen to be.

Although the idea is not new, (EO has a product in the US that also runs a pen-based operating system), General Magic offers two new technologies, Telescript and Magic Cap. Telescript is a programming language and software which will enable computers to exchange data with other Telescript hosts across any network, and acts as a global platform-independent messaging resource.

Magic Cap is the applications platform, based on Telescript. Software developers and on-line databases can be ported across to it. The investors will be developing their own hardware to run the software. And so will Commodore? We'll see. **a**

amiga answers

APPS

Dear **aui**,
I bought your August issue of **aui** and thought that the Ameko program would be a nice little feature on my Workbench. I am not entirely a novice to Amigas, although at my school we use Acorns. You see, the problem is, I loaded up my Workbench and made a copy of the coverdisk. Then I got a new disk and dragged Ameko onto that disk with nothing else on it. I double clicked it and up came another window. I double clicked the icon saying 'double click to decrunch'. It then asks for my Workbench 2 disk and then my coverdisk. Next it says, please insert 'volume lha'. I haven't got a disk called lha, so please could you help me out. By the way my computer is an Amiga 600, if that helps. I also tried the documentation on Ameko, but my word processor does not like it. I just comes out as a jumble of letters! Do you boot up the Superdisk without Workbench?

Also, how can you change between low resolution and high resolution on Deluxe Paint? I use low resolution. My TV is a Genexxa CTV1410 Digital.

Charles Saul
West Yorkshire.

Dear Charles,
The DPaint problem is easy: just select screen mode from the first menu and select a Hi res mode such as 640 by 400. Remember, however, that a TV is not really designed for Hi res work, you will need a monitor for it to be really useable.

Sorry about the problems on the August coverdisk. I expect that you will have noticed the reply to this problem in previous issues of **aui**. It was our muck up - an assign should have been made. However, as you are familiar with the Amiga, open up a shell, and copy the program lha from the root of the coverdisk to your RAM: disk.

Next enter the CrunchedFiles directory and copy the file Ameko.lha into Ram: Once you have done this copy the two files from RAM: onto a new disk. CD to the new disk and type:

lha x ameko.lha

That will decrunch the Ameko files and you should be able to use the program then.

If you have managed to get the Ameko docs then you have managed to decrunch the program somehow. The docs are in a compressed format generated from a program called Powerpacker, the utility ppmore is what you need to read them, or Powerpacker to unpack them. Powerpacker does have its uses, but generally it is a lot more trouble than it is worth. I would much prefer it if programs were left alone, allowing the user to decide on the compression used. It makes no difference to the coverdisk, as we use lha as a general purpose compressor.

I am looking into all these aspects of the coverdisk. Hopefully, if all goes to plan, we will be able to write a proper specification for the coverdisk that will provide a consistent user interface for **aui** readers.

PROG

Dear **aui**

I am thinking of starting to program in assembly language on my 1200 Amiga and I would like to know if the program Devpac 3 works on the 1200.

Could you advise me on which good books are available on graphics, sound and general programming techniques and are there any books on programming for the AGA chipset and the 68020 processor?

Mr A Pelton
Grimsby

Dear A Pelton,

HiSoft have confirmed to me that Devpac 3 works fine with the A1200, but make sure that you get the latest version, as there was a very minor bug with the debugger in the early releases. This prevented correct operation with the A4000 and other 68040 based machines (this does not currently affect you, but should you ever upgrade your A1200...). If you buy a new copy you will be OK, but just beware of buying second hand if you get offered anything. The biggest problem that you will face is coming to grips with the

Amiga OS. You will HAVE to learn enough C to be able to understand the only good books on the Amiga OS - The ROM Kernel Manuals - these are the official CBM documentation and contain hundreds of examples of code.

There are several books on programming the 68000 and most of them are very much alike. The obvious book to go for is Motorola's own documentation, but you may not like the style. The best thing to do is go to a technical bookshop and have a browse. There will be nothing Amiga Specific however.

As an aside, I happen to like the style of an author named Dr Lance A. Leventhal, who normally writes for McGraw-Hill. His Z80 book was very good, and he wrote a 68000 book with Doug Hawkins, Gerry Kane and William D Cramer. This book does cover the 68020, BUT check to see if there has been a third edition yet as that might cover more than the 020 processor. The book is called:

68000 Assembly Language Programming Second Edition ISBN 0-07-881232-1

I happen to like the style of this book, but it might not suit you, as it is very detailed indeed. One other book (again in C) that really complements the RKM's is Rob Peck's Programmers Guide To The Amiga ISBN 0-89588-310-4 (Sybex). This is a book that I wish I had found years ago! Some of the Mastering the Amiga and the Abacus books may be worth a look, but you can spend rather a lot of money on books. I would suggest that you get the RKM's, and a 680x0 book. That way you will be able to have a play with C as well; (using a PD compiler such as Matt Dillon's DICE) that way you will have the best of both worlds.

There is NO information for programming the AGA chipset at all. Commodore will not release this information generally, because the chipset will change - all access to these chips should be done via the OS. There are files available to developers, in the form of the Native Developers Disk Set. The WB2 versions are available, but not the WB3 AGA. They should be available fairly soon. I will ask CBM if and when, so look out for some news fairly soon.



Answer Types

APPS

Programs etc]

VIDEO

Video related problems

COMMS

Communications

PROG

Programming

OS

Operating System

PRINT

Printer Problems

OTHER

For anything else

PROG

Dear **aui**,

I have recently written several programs which allow an Amiga to be used as a file/print server, remote compiler etc. via the serial line which I intended to release into the Public Domain. However, whilst soak testing the system, I discovered that it is not reliable as it sometimes 'loses' blocks of data. This is most pronounced when sending to a slower machine (A1200 to 500) or when a slow medium is being used on the receiving machine.

After many weeks searching my own code for anything which may cause this problem, I have reluctantly come to the conclusion that the system software is to blame, as this is the only part of the software which could affect the timing of blocks sent.

The only reason that I can think of for this phenomenon would be if the serial line driver only actively monitors the serial line for XON/XOFF control characters or RTS/CTS line low during block transmission, then assumes that the receiving node is able to take data at the beginning of each block.

Is there any way that I would be able to get a copy of the serial

line driver source code to see if my assumption is correct and/or modify the code so that it permanently monitors the serial line, rather than writing my own version of the driver and risk doing something which is Operating System unfriendly?

Alan Potter
Surrey

Dear Alan,
There is nothing wrong with the serial port driver; your problem is in the way that you are accessing it. The fopen() commands are very basic and just send a data stream to a device. There is no facility for real flow control using this method.

What you really need is the Rom Kernel Manual DEVICES, which will give you some very good examples of how to use the serial port with all sorts of features.

You will also find that the examples are available for download from many BBS systems and Internet sites, by a strange quirk of nature the file names start with RKM.

OTHER

Dear aui,
I am writing to you because I wrote a demo (well, I'd call it more a musical demo, as the strongest part is the music, not the graphic effects) and I would like to earn some money with it.

Someone told me that demos are copyright and I could sell it to a PD house. Is this true?

If it is, can I sell it to the number of PD houses I want (since these are PD houses)?

Pedro Duarte
Portugal

Dear Pedro,
Generally speaking most things are copyright. For example, this reply to you is copyright aui. The exception to this rule (There's always one!) is PD. The name says it all, PUBLIC DOMAIN. If you put anything in the PD, then you give up all rights to it.

As for music, well, that is even more tricky. If it is your own composition, then no problems, you can retain the copyright. If it is a very old piece of work, say one of the classic composers then you will be OK, providing you have not sampled it from another source, where the recording and performance will be copyright.

Copyright law gets very complicated indeed.

PD houses will NOT pay for PD materials. Demos are old hat and generally not worth the cost of the disk (Sorry to say that, but that's how things have progressed).

The other way to do things is to use Shareware. This is where you release a version of a program that

can be freely distributed but you retain the copyright. You can then ask for a donation. This is NOT very lucrative, especially for a demo. The idea behind shareware is 'Try before you buy'. If you like the program after using it a few times then you send a registration fee to the author and you might get an up to date or enhanced version of the program in return. As you can see, this is not the sort of thing that would suit a demo. Once again PD houses, who do distribute shareware, will not pay you for it. They will happily include it in their collections (if suitable) and it is then up to the user to decide if he/she sends the requested registration fee.

OTHER

Dear aui,
I would like to know if it would be possible to run PC software on an A1200.

Can it be done with an emulator like the Commodore 486SLC-25 and with good results like good speed and decent graphics?

I would like to run the PC versions of Falcon V3.0, Tornado and the Microsoft flightsims on an A1200, if all of that is possible, of course.

I now have an A500 with 1 meg, a 1084 monitor and a second drive. I would like to go to an A1200 but I'm not ruling out a PC. But then I wouldn't be able to run my Amiga games programs. So I'm trying to find out if it isn't possible to get the best of both worlds in an A1200.

Also, what sort of hardware do I need, such as hard disk, memory and monitor (at least VGA) - can you help me on this?

Dirk Oepelsmaeker
Belgium

Dear Dirk,
I get the impression that you are rather keen on aircraft type programs!

You have asked a rather loaded set of questions and it is going to take quite a bit of care to get your needs into perspective.

It is possible to run PC software via emulators (which are just software based) and they are dreadfully slow.

The other method is to use an actual PC. The 486SLC-25 IS a 486 PC. It is NOT an emulator. This is a very distinct difference that many people fail to grasp. The 486 bridgeboard, as it is normally called, will make use of some of the Amiga's resources such as screen, storage and I/O. However, as the screen is a software emulation (we are now talking about genuine emulation) it can be rather slow.

This is not really of any use to us, as the bridgeboard does not fit in the A1200 at all. It is designed for the A1500, A2000, A3000 and A4000 machines. When plugged into these machines you can also plug in PC expansion cards to give you PC video cards and I/O, quite a neat trick.

There are some hardware based PC units for the A1200, but it is very doubtful if they will work with all versions of PC software. Come to that, even PCs have major problems with some software.

The main thing to remember is the old phrase 'buyer beware'. PC add ons, both hardware and software, do work, but not with every possible combination.

Maybe with the advent of the CD32 you would be better saving your hard earned money for a while and wait to see what comes out for that rather nifty machine.

When you start talking about system resources, well, the simple answer is that you cannot have enough!

Monitors: the CBM 1960 gives a very good picture and is a little better than VGA in terms of its frequency response, as it is a true multisync (VGA monitors are normally a little more limited). However, a good VGA monitor should work with the A1200, but you will not be able to use the higher standard screen modes. We have in this very issue a major coverage of a wide variety of monitors. Take your pick.

Hard drives: well, some years ago I would have said 20 Megs, now I normally say 120 Megs! Honestly, get as big a drive as you can afford - you will not regret it!

Memory: if you get an A1200, get some fast memory plugged into it, as that does make quite a difference to its performance. An extra 2 Megs is well worthwhile, any more than that accept with open arms, again you cannot have too much RAM. And we are currently reviewing the Alfaram from Golden Image which you might want to consider.

What you really need to do is to work out exactly what you want the machine for. At the moment you are all fired up about flight simulators. Yes, there are some good efforts on the PC, just as there are on the Amiga. What will there be available on the Amiga in a year's time, or on the PC? The answer is that you don't know, nor do I, but one thing is for sure, you can bet that there will be quite a few new programs for both machines. Will Falcon be 'the best thing since sliced bread' in six months time? Will you still be playing it? (As a note, Microprose have yet more flight sims in the pipeline and were showing them recently at the ECTS. They were as classy as ever and ran at just about the right speed on the A1200 with hard drive - ED).

If you have a real need for a PC, then fine, go and buy one. If not save your money and get the A1200 or perhaps the CD32 when it becomes established. Or even the possibly fabled machine that CBM has talked about - the Amiga that can run PC stuff. One thing is for sure, the longer you wait the more power for your money you will get, whatever you decide.

UNDERSTANDING LHA

Many readers seem to be having a problem with this very common data compression utility. We hope, after reading this short article, such problems will be a thing of the past. Lha has many options, but to keep things simple I will only consider three of them. The eXtract option, the List option and the Add option. The command letters for these options are x, l and a respectively. In order to use Lha, you need to understand how to use the Shell interface on the Amiga.

This is not much different to clicking with a mouse, but you do have to do some typing! Open up a Shell and you will see a window on the screen. This window gives you access to the Shell commands. Try one, type CD <ret> and you should see a little message. This message tells you where on the storage device you are looking. It might say SYS: which is normally the Workbench disk that you booted from. Try another command, CD RAM: <ret> You are now telling the system to move to the RAM disk, a message will tell you that you have got there. The Shell will say something like 2.RAM:>.

There is nothing hard about that, in fact it is exactly the same thing as clicking on the RAM disk icon with the mouse. Type DIR <ret>. You will see some text. This is the Directory of the RAM disk. This is the same as when you click on a drawer and see the contents appear as icons. The only difference is that the DIR command is much more powerful in that it will show ALL files within the drawer or disk. (Much like the 'show all files' option on WB2 and above). The little message that the Shell gives you is called the PATH. This is simply the location of the drawer on the disk. A path of 'UTILITIES:TEXT_TOOLS/EDITORS/CED' can be read as the program CED (Cygnus ED if you are interested) located in the editors drawer, which is in the TEXT_TOOLS drawer which is on the UTILITIES device. This is the same as clicking on UTILITIES then TEXT_TOOLS then EDITORS and then CED with the mouse. Once again there is nothing hard about that, is there?

CD is a very potent command, it has a very easy way of moving about the various directories of the path. CD / <ret> will move you down one level, so in the previous example if you enter CD / <ret> the path will read UTILITIES:TEXT_TOOLS. If you then type CD EDITORS <ret> you will be back to where you started. In this manner you can move all over the Amiga and look at what is stored there.

The important thing to remember is that the names are the same as the names of the icons. Try it out! CD to a drawer and type DIR. Then open that drawer with the mouse and you will see the same files. Some files have strange names, but once you know what the names mean, it is just the same as what you see using the mouse.

Take a look at one of my directories: env (dir) lib (dir) include (dir) libs (dir) c (dir) icons (dir) starter_project (dir) rexx (dir) help (dir) source (dir) examples (dir) extras (dir) MyCode (dir) c.info examples.info extras.info help.info icons.info MyCode.info Read.me readme_6.1 ReadMe_6.1.info readme_6.2 ReadMe_6.2.info readme_6.3 ReadMe_6.3.info source.info starter_project.info Looks complex doesn't it?

So let's break it down a little. Anything ending with (dir) is a directory or a drawer in mouse terms. Anything ending with .info is the actual image that you see on the screen (the icon). If you use IconEdit you actually produce these .info files.

This is why things seem to be paired. There is a MyCode directory, there is a MyCode.info, which is the little icon that you would normally click on. A name such as readme_6.1 without anything after it is a file (in this case, it is the update text file for SAC C V6.1).

It does have a .info version, this allows you to click on it with the mouse and read it. The other thing to note is that there are some files without .info versions. These are normally hidden files that Workbench cannot normally see (unless you have WB2 or better). However, you are not restricted at all when you use the Shell.

You can CD into anything with a (dir) just as you can click into any drawer. You now have the ability to move around the Amiga anywhere you want to. All that you need to do now is know how to copy and delete files and you can start to use lha (you thought I had

forgotten about that didn't you?) COPYing files, well, the command to do that is COPY. The way to use the COPY command is fairly simple and is similar to dragging an ICON with the mouse, you just have to tell the Amiga where to drag it from and where to drag it to.

Say you wanted to copy a program called CED that was in the Editors drawer which was on the Utilities device into the RAM disk. A simple job for the mouse and not too hard from the Shell: COPY FROM UTILITIES:EDITORS/CED TO RAM: <ret> The general purpose command is: COPY FROM {full source path} TO {full destination path} and if you look at the command that is just what we did. What's more it is the same as what was done with the mouse.

You tell the Amiga where the program is and then where to put it. The FROM and TO keywords make it very obvious which is which. Tip 1: Copy programs into the RAM disk.

Providing that you have enough memory that is the fastest place to put things. Tip 2: If you do not have enough memory, then you have to copy to another disk. Get into the habit of NAMING disks. If you say COPY DF0:superprog TO DF0:, the Amiga will get upset.

If you said COPY Superdisk25: programs/editor.lha TO MySpareDisk1:, the Amiga will tell you to insert each disk when required. So you can now move about in the Amiga's directory structure and you can copy files wherever you want to.

Now for the decrunching. Lha tags all compressed files with the extension .lha, so they are very easy to find. To keep things even simpler, COPY the program lha which is the crunch/decrunch program into RAM:. You will find lha on the coverdisk in the C: directory, or in the root (the very lowest directory, CD / until you can go no further and you are in the root).

The command for this would be :COPY FROM Superdisk27:C:lha TO RAM: <ret> Next CD into the Superdisk directory that holds the crunched files. (Look for the .lha extensions). Copy the file that you want to decrunch into the RAM disk. CD to the RAM: disk and then decrunch the file with the command:lha x crunchedfile <ret> The x means eXtract.

Note that you do not have to give the .lha of the file as lha will assume that anyway, but it will not matter if you do put .lha. Lha will tell you what it is doing as it

decrunches the program. If you run out of memory in the RAM: disk, copy lha and the crunched file to a spare disk, CD to that disk and then decrunch the file in the same way. Unless you tell it otherwise, lha will decrunch the file into the same directory that it is in.

That's all there is to it, If you want to create .lha files that is just as easy, collect all the files you want to crunch so that you know where they are and then enter:lha a archiveName prog1 prog2 prog3 prog4 <ret> If you have more files than that just issue the command again with the extra files.

The a means Add, so that is exactly what it does with each file, adds it to the archive.lha a fred prog1 prog2 prog3 <ret> will create a file called fred.lha which will have the crunched files prog1, prog2 and prog3 in it.

Two last points: another lha command:lha l filename.lha will list the contents of a .lha crunched file with some information on how big each file is, which you may find useful and another CLI

command:DELETE filename <ret> This does just that and will remove a file. This is similar to putting a file into the Trashcan and then emptying the trashcan.

Be warned, there is NO SECOND CHANCE with this command!Quick Reference lha x filename Extract the contents of a .lha file and put them in the currentdirectory.lha a filename prog1 prog2 prog3 create a crunched file called filename.lha and crunch the files prog1, prog2 and prog3 into it.lha l filename list the contents of filename.lha CD <ret> show current directory level.CD drawername <ret> move into directory drawername.CD / <ret> move one level towards the root of the directory structure.

DIR <ret> list the contents of the drawer. COPY FROM SourcePath TO DestinationPath copy a file from one device or directory to another. DELETE filename <ret> delete the file filename from the current device. That (we all hope!) is all, folks!



When writing to Amiga Answers include as much information as possible about your system and about which software/hardware you are running. This will help to determine what your problem might be and its solution!

Send your questions to:

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- * Full expansion bus
- * Headphone jack
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- * External brick power supply
- * Internal MPEG FMV expansion capability
- * Multiple session disc capability

The exterior may be sleek but lurking inside the Amiga CD32 is a technological wonder. It's heart is the mighty powerful EC020 processor from Motorola. This contains the 32-bit technology which has made the Amiga 1200 a runaway success throughout Europe. Alongside it is Commodore's unique custom G.A. (Advanced Graphics Architecture) chipset - comprising three chips nicknamed Paula, Lisa and Alice. Together they make Amiga CD32 and awesome powerhouse of high speed graphics andunning sound capabilities. In fact, the machine can display 256,000 colours on screen (compared to Sega's Mega CD which can only display 64) and has a colour palette of 16.8 million colours. Amiga CD32 also comes with a chunky 2 MB of RAM (that's 15 times more than Mega CD) and a double speed drive.

INDI DIRECT MAIL

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Hi, It's been quite a month in the Commodore marketplace, no sooner had we all been told that Commodore had lost their shirt than we have been inundated with masses of good news.

First we have the launch of **two brand new Commodore Amiga 1200 packs** one aimed straight for games market the other firmly at the more mature purchaser. **The Chartbuster Pack** is great value bundled with Nigel Mansell's World Championship race simulator, Trolls AGA and the all time favourite Amiga Challenge Pack. **Desktop Dynamite** reinforces the all round strength of the A1200 with a very powerful package based around Wordworth AGA, Print Manager, Deluxe Paint IV AGA, Oscar AGA and Dennis The Menace AGA.

It's good to see Commodore create such a clear distinction between the Amiga 1200 market and the games console market, soon to be dominated by the Amiga CD32.

As I write this article the first of the CD32's are about to land in the UK with a promised street date launch of the **first week in September**. The major news around this product is just how many of the software publishing houses are enthusiastically writing for it and of course that Commodore have decided to bundle 2 great software titles at launch.

Not to be outdone **INDI have added a third** so look forward to receiving Oscar, Diggers and Lemmings when you take delivery of your New Amiga CD32.

The other item of news from Commodore does appear to be causing some confusion. It is true that Commodore have appointed the giant **ICL** company to look after the warranty on their products but this only applies to Amiga CD32 and the Desktop Dynamite Pack. All other products and packs previously purchased or yet to be purchased will be covered by Wang.

Finally it was very sad to hear this week of the demise of Diamond Computer a well known advertiser in the Amiga Market. There is no doubt that the recession continues to cause the closure of many companies often without warning. Once again please be careful with your hard earned money and make certain that you follow the code printed in most magazines before you make that special purchase. See you next month.

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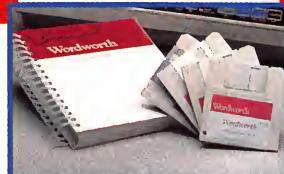


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L to R

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write to reply

This is where you get your chance to speak - or write - your mind about what's bugging you. Bud

Vennos fields the bouquets and the brickbats.

Dear **aui**,
Barry McCarthy's appeal for a standard Workbench style for Amiga graphics programs is a disturbing trend among UK reviewers. It sounds like publicity hype for Apple Computers (which I suspect many of them work with). It is no accident that many of the most Amiga graphics software has adopted the "stackable" menu system pioneered by Newtek with Digipaint3 - the programmers know it is superior to the system used by DPaint, Windows etc. Rigid operating systems like Windows (I have not used a Mac so I can't comment on its OS) stifle development of better ways of working. Remember Shaw's Principle: Build a system that even a fool can use, and only a fool will want to use it. Don't get stuck in the mud. Barry.

Yours faithfully
John Jackson
Leeds

Dear John,
Hey, thanks for the constructive criticism! I'm really upset now. Actually it's a good point and I've thought long and hard about it. I really feel that there is nothing wrong in standardising 'look and feel' (some companies even go to court over it, how childish). This enables easy portability from one program to another and higher compatibility with OS and hardware upgrades.

You feel that all programs should ignore this and have their own interface style? How about CBM and software manufacturers getting together and gradually developing a jointly agreed interface? This is happening, of course.

I'm not saying that one company should force everyone to use the

same interface but that everyone should work together to gradually develop a better and better standard. Sure, there will be concessions on all sides but the benefits of a single, familiar, rock solid interface that all programs and users can share and feel confident with surely outweighs the disadvantages?

By the way, please don't jump to conclusions; I don't use an Apple, I use Amigas exclusively and I think you'll find that a great number of Amiga reviewers are pretty Amiga biased. Strange that.

Barry McCarthy.

Dear John,
I thought I'd get Barry to give you his answer as your comment was aimed at him. However, I'd like to get in my twopennyworth. The point you raise is an interesting one. Individuality versus Standardization. Or as some might put it, Isolation versus Communication. We are becoming, whether you like it or not, a standardized world, really that is to help more and more people use the same tools, understand the same "language", share the same concepts, live in the same world. Of course, that does deprive anyone of a measure of liberty. You don't have the freedom to drive on a different side of the road to everyone else.

Computing, which is surely becoming one of the most common activities in the world and will become even more universal, is still, compared with most other human activities, in its infancy. Like the early railways, everyone started off with their own "gauge", but gradually in the cause of simplicity and the apparent good of the greatest number, standardization takes over.

You may not like it but it's inevitable if the mass audience, which works perhaps at the lowest common denominator, is to be captured.

But your point about only fools using some systems is a good one. What we have to achieve is the raising of that lowest common denominator, educating the mass audience not to be "fools" but to want the best and not just the easiest. For us that may mean the "individual" Amiga being

chosen over the "standardized" PC so that some of us are helping to set better standards to the poor misled "fools" who don't, probably, know what they're missing. But even such users as yourself who are clearly prepared to work that bit harder, go that extra mile to reach for the best, wouldn't want unnecessary difficulties put in your way. So Barry's point about a measure of uniformity for interfaces must be well worth considering.

Dear Sir,
I used to subscribe to **aui** when I lived abroad, now having returned to the UK and settled in I went to my local W.H.Smiths to get a copy but could not find it. There were other semi-serious Amiga mags but no **aui**. After a few visits I eventually found it near but not with the others.



I was quite disappointed with it, firstly it has a useless (to me) "FREE" disk on it. This of course is not free as the mag price is far higher than that of a similar style and standard video, photographic and motor for example. Also the contents of the two copies I have so far purchased are not as good as I remember.

Nevertheless I would probably subscribe if the price were more reasonable, which it could be without the disk. I think you should make **aui** available, even if only by subscription, without the disk at a lower price. As it is I shall only buy a copy if there is an article that I absolutely have to have.

Whilst I am sure that I am in a minority among your readers I do spend a lot on my system and I am

thus someone your advertisers would like to get to. My system comprises a 4000/030 with 2Mb + 8Mb of RAM (the other 8Mb is now on order) and a 80Mb HD (another 170Mb drive is on order), Opalvision, Epson GT6500 Scanner, Multi-scan monitor and colour printer. I shall shortly be linking to a S-VHS VCR, either via the Opal Video Processor (if it appears) or with an external Genlock and Frame Grabber or by replacing Opal with IV24 or some other 24 bit system. I plan to spend around £1500 to £2000 over the next few weeks and then purchase such video/graphics software as seems desirable on an on-going basis.

Yours sincerely
G.D.King
Cambridge

Dear G.D.King
You certainly are in a minority. A vast majority of readers, not only of **aui** but also of the other "semi-serious", as you call them, Amiga magazines find that the readers are not just vaguely interested in the coverdisk but often condition their choice of magazine on what is on the coverdisk - or disks.

It may be the case that you find the programs on the coverdisks "useless" but that apparently does not apply to most readers. They enjoy and it seems use the programs that we select for them.

There is another point too. Anything stuck to the cover of any magazine used to be considered a promotion. With the coming of

a computer like the Amiga the world has changed. We are no longer just a flat sheet of paper but actually a form of multimedia, giving you the chance to use your computer in ways relevant to the magazine and to you yourself. Now that's an altogether different way of enjoying a magazine dimension than existed previously.

If you choose to regard such "free" disks as NOT relevant, that's up to you but thousands or even millions of computer users would disagree with you. Computers are there to be used and the coverdisks we supply help you use them. That's why your comparison with magazines in other fields doesn't hold. Your car might be made to run better by the "promotion"

write to reply

CONTINUED

of a tin of oil on the cover of a car magazine but you won't get that every month. You do with **aui** and the other computer magazines that carry disks, and these days virtually all of them do. As for the price, well disks cost money and what's on **aui** disks would surely cost you more if you bought it. And as for subscribing without the disk, we'd soon get screams of rage from those who didn't get a disk that they knew they wanted from the SuperDisk pages.

I'm sorry if you think that **aui** is not as good as it was. As I'm increasingly being accused of joining the sagging wrinkles, I'm probably not either. But I hope that at least one **aui** reader might disagree me about that as the mass of them appear very strongly to disagree with you about the quality of **aui** today.

Dear aui,
On checking through the contents and coverdisk pages of this months (September) issue of **aui** in WH Smiths on Thursday morning I read on Page 7 under the heading of "disksalv2" a statement to the effect that "Quarterback Tools Deluxe is REVIEWED THIS MONTH...."

Not having the time to verify this as I had a bus to catch I bought the magazine in good faith and on trust although I am not one of your regular readers. You can imagine my surprise, disappointment, dismay and disgust when, on reading the magazine at home, no trace of the promised review could be found.

My feelings were not improved when on telephoning your editorial department to obtain some sort of explanation and perhaps even some mild form of apology, for the broken promise I was informed by some young person that ".....it's not my fault I'm only a contributor....." and if I wanted to complain the person I should talk to was the Editor". (What a chain of command.....from the office boy to the big boss with no intermediaries!!!!!! Have you never heard of Customer Services ...????). On asking to talk to your illustrious self I was fobbed off with what I had expected to hear, ie. that you were not available!!!

This is not the first time that I have found it necessary to write to a self acclaimed quality magazine (YOU actually claim that you are the first and THE BEST !!!!!?????) regarding the accuracy of published statements and/or program listings and I find that these errors and contradictory statements are inexcusable.

Whatever happened to proof readers?

As mentioned earlier I do not buy your magazine on a regular basis, as I am a retired person of limited means, and having bought the September issue on a false promise I feel that some form of apology and recompense and warranted as a direct result of your very misleading statement.

Yours Disappointedly,
L.J. Brittain.
Kent

Dear L.J.Brittain,
You are quite right. In the SuperDisk pages of the September issue of **aui** it does say that Quarterback Tools Deluxe is to be reviewed that month. And you are right too in saying it did not appear. However, had you looked in the Contents pages where the list of what actually is printed in the magazine is, you would have found no reference to Quarterback Tools Deluxe.

Now you must know that we prepare some articles before others and there are often late changes to be made. We put together the Contents as the very last pages so that they can be an accurate guide for readers. (Whether they always are is another point...). And unfortunately in this case at a very late stage, Quarterback Tools was pulled out but the SuperDisk pages had already gone to the printers.



So that is why there was the inconsistency.

Lesson One - don't always believe what you read in the papers.

Lesson two - Read the Contents if you want to know what's in the magazine.

And for Lesson Three, what about..Don't, like Vlad the Impaler, kill the messenger if you don't like the message. We are a magazine with a

small staff of journalists, most of whom have more experience with the Amiga than with the press or readers. There are few of the layers of authority that you might find in big organisations like the daily newspapers. The poor chap who became flustered by your call is great in assessing a faulty hard drive but when you took an aggressive tone knew he was on dodgy ground and rightly suggested you speak to the Editor. And you were fobbed off..

Because he loves and trusts the rest of us, the Editor spends a large part of his time on the beach in the Bahamas

admiring the topless girl water skiers

and keeping fit by limbo dancing with them at night. (NO, HE DOESN'T!

ED), No, of course, he doesn't... He spends loads of time at boring press conferences where wildly over the top executives beat his ear about tape streamers or Dungeon Master clones. Or in meetings where he is called on to make big decisions like what to leave out of **aui** when something urgent has just come in. (Like Mike Nelson's missing copy).

Which he just might have been doing when you telephoned. But, in spite of the Government's efforts to destroy our public services, there is, as you discovered, still the Royal Mail. And what you get when you use it is this reply and, because the Editor is a soft-hearted old thing, if you look in your letter box, a free copy of **aui** October in which Quarterback Deluxe Tools really did appear. (The Ed is softhearted.. I'd have sent you a bill for the tranquillisers the tyro journo has been taking since your tirade!)

And the First we certainly were. The Best? Well, frankly I don't think there's any doubt about it now, not if you are interested in anything other than games. I'd soon hear it from the readers if they didn't agree. (The only thing they seem to miss is the spelling misstakes!)

Dear **aui**,
I purchased Zool for my Amiga A4000 as one of the first games to actually say that it was specific to the new AGA chipset. It didn't work. I wrote to Gremlin who were very sorry and said they would fix it. This was back in January of this year.

Early on Gremlin were very helpful and apologetic and Tony Casson (QC Manager) seemed genuinely interested and concerned. After months of waiting

(with the odd 'phone call here and there). I finally received a new letter from Gremlin. This time it was from the famous (or infamous) 'faceless bureaucrat' who blamed THE SHOP (apparently compatibility with the A4000 was a misprint!) and they sent me a refund for the cost of the game.

Why can't they be honest?
They THOUGHT it was compatible

with the A4000, realised it wasn't, found it would be too difficult to make it work (too many illegal calls to the OS?) so they gave up. Makes me sick

Steve Calkin, Essex

Dear Steve

I'm sorry to hear about your problems with Zool (although I wasn't so impressed that not being able to play it would be a major disaster). As to the time it has taken for you to get an answer from Gremlin, it is true that time passes in very strange ways when you deal with any software company! (The saying is that NO software project, yes, none at all, has ever got out on time!)

I spoke to Gremlin who told me immediately that Zool was incompatible with the A4000 (be it 030 or 040). Whoever told you it was in the first instance was sadly misinformed. The reason lies not with the OS, but with the processor speed. Zool does use the AGA chipset, but only on the A1200.

I'm afraid that the news does not get any better. There are no plans to convert either Zool or its imminent sequel to the A4000, because the user base, especially the games playing user base, of that machine is too small to make it commercial. The assumption, rightly or wrongly, is that people with this machine are only using it for very serious applications and not for the truly important mission of completing fast and furious games.

All that can be done is for A4000 owners to complain, kick, scream and shout until the software companies listen, but I wouldn't expect fast results (as I guess you've realised). If you really want this type of game (and I know it might seem an expensive way of doing it), buy an A1200 or even the CD32, which most software houses have now decided to support.

It's a shame, but, as they say, C'est la vie. (Well, they do in France anyway. And in Sheffield too where sophisticated Gremlin people like Colin Stokes and David Martin rarely speak anything but French, naturellement...)

David Taylor

Send your letters to:

Write to Reply

aui

Amiga User International
48 George Street,
London W1H 5RT

If you wish to send an Email letter to Write to Reply or Amiga Answers, **aui** can be contacted on CIX as
Amigauer@compulink.co.uk

Did you want to win an exploding android? No, sorry an Amiga CD 32. Well, you're too late - unless you were one of the estimated 150,000 people who goggle-eyed wandered through the cavernous halls of London's Olympia recently. They were there, drawn by a blitz of propaganda and public relations hyperbole that largely appeared in the media controlled by Sun and Times owner Rupert Murdoch's News International. For it was they who staged the UK's first Consumer Electronics Show which drew previously unknown-size crowds to see whatever smaller and faster



Not just any old Android!

Very much alive

marvels the stores will be plugging in and plugging to you this year's end.

Unlike the CES in the USA this

show wasn't for the trade but for the genuine consumer - the punter, as generally, he is often called.

alive



CBM - Bringing power to the people.

It was this potential and in fact actual multitude of punters that drew our very own Commodore to attend - and attend in force. They doubtless viewed this as the opportunity of the season to bring their still wet-behind-the-ears Amiga CD 32 powerfully into the public eye. There can be no doubt they if that was their aim then powerfully they achieved it.

Their Stand was one of the biggest in the Show. Smartly-designed and very accessible it contained well over thirty Amiga CD 32s fizzing away with a constant stream of dazzled players experiencing the thrills. Three sexy, green clad, green haired space girls broadcast the CBM story in close harmony style. 4000s carried fast moving movie-style MPEG images. Bars and Pipes got an open mouthed hearing from wandering minstrels. And 1200s were caressed by the longing fingers of anoraked youths

who aimed to persuade Dad they really needed to upgrade from their 500s.

Presiding over it all was the Android. "Not just any old Android" as it had been described by David Pleasance, CBM's Joint-MD. The Android is the explosive - or do we mean exploding? - star of Commodore's upcoming TV

commercial and the competition to win an Amiga CD meant you had to give it a name. We could only think of "Notjustanyold" but we don't think we've got much of chance. 100,000 plus punters have probably called it Andy.

A.M

drool for zool

If it runs on electricity it was there, rock bands thrashing yards away from a corporate multimedia presentation was only the start! A few yards further and the real HiFi village seemed to offer the tranquility of bespoke English stereo equipment. The atmosphere was unfortunately more like Dixons on a Saturday afternoon!

Live '93 really struck me as a show. There were so many stands with their 'entertainers' that the whole

The Red Room containing some real fantastic cars with world class ICE (In Car Entertainment) was a hugely popular display. I'm sure I saw a sign reading "Dream on" somewhere. Still on (thin?) ICE the Red Room had escaped the indubitable pleasure of housing the world's loudest car stereo. This was to be found just past the electronic slimming machine and palmistry stands, its presence made clear by a sign saying "Earthquake demonstrations every half hour"! An 80,000 watt car stereo? Get real. They also claimed to have the "loudest car in Europe", which unlike the Earthquake truck doesn't need the national power grid. Earplugs anyone?

It was all a bit much really, and yet I came away feeling that something was missing. There were

no digital watches (old hat?), few pocket calculators (passé?) and, worst of all, there was no fresh coffee in the press room! But there was a beautifully designed CD player from Apple. Palm-size mobile poseurphones. Some Darth Vader helmet-shaped six way loudspeakers that I ached for. An astonishing camcorder from Sharp, the ViewCam, that has a movable 4" LCD screen which doubles as a TV as well as a viewfinder: a long queue for W Industries Amiga-based virtual reality stand and an expensive pair of specs, around £600, that turn your common or garden TV set into a 3D experience. And something tucked away in the New Technology area which for me was the shy star of the Show as a sign of things to come. A humble black and white flat box containing a CD-Rom - an ordinary compact disc from which you could play the whole of the Beatles' movie "A Hard Day's Night". Yes, a real movie on a CD... the age of multimedia is here, folks. Roll on the CD 32.

P.H.

**Patrick Howlett,
Anthony Mael
and David Taylor
get lost among
the gizmos of the
Live '93 Show.**

thing was more a circus than an electronics show. Nevertheless beneath all the panache, the companies had some amazing products on show.

Canon had a great bubblejet which produced stunning colour printouts and Sony had a huge simulator on hydraulics. For me though, it was the more whimsical attractions that caught the eye.



Hello David, I'm Zool.



Experiencing the touch of Virtual Reality.

After all the hype, I had to go and see Mortal Kombat. Honestly, they can't even spell it right. The Stand had a presenter who said 'er' constantly and kept looking around frantically to the others on the stand for support, which he didn't get. The game was displayed on huge screens all over as the competitors fought it out. I wish they hadn't bothered. The game is full of violence but can't hide the fact that it's rubbish. Still, I bet the sales prove my opinion to be worthless.

Luckily, as I walked away from that disappointment, I ran into a stand that was giving away fizzy Chewits to tie in with the Chewit game they were releasing. The game looked pretty ordinary, but the sweets were very nice.

Gremlin had lots of games on show, but there were so many people playing them that I didn't get to play them. Admittedly, I've already seen them, but I liked some of them so much that I was a bit put off at not getting another bash. But I did say hello to a man (girl?)-sized Zool.

D.T.

aaaaaaaaaaaaaaaaaaaaaa

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